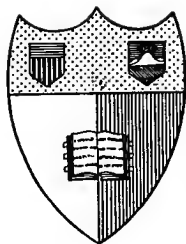


2a
B1555
P5



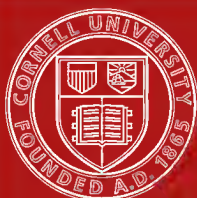
New York
State College of Agriculture
At Cornell University
Ithaca, N. Y.

Library

CORNELL UNIVERSITY LIBRARY



3 1924 055 344 638



Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

<http://www.archive.org/details/cu31924055344638>

PROBLEMS OF THE ELEMENTARY SCHOOL

BY

ARTHUR C. PERRY, JR., PH.D.

AUTHOR OF

"THE MANAGEMENT OF A CITY SCHOOL"



D. APPLETON AND COMPANY
NEW YORK CHICAGO

COPYRIGHT, 1910, BY
D. APPLETON AND COMPANY

PREFACE

THIS study of the elementary school consists of two parts; the first is concerned with the broad general problems dependent upon its organic structure, the second with specific phases of its work as planned and directed by the principal of a school or the teacher of a class. Although these two parts might imply each its own audience, I venture the hope that the general discussion in Part One may not only give the general student and the lay reader food for reflection, but that it may also meet responsive interest in the thought of earnest practical teachers.

For the past few years our teachers have been the subject of rather microscopic study; their shortcomings have been duly analyzed and their responsibilities extensively chronicled. While they have been diligently tilling the educational soil, the educational geologists have looked on with voluminous criticism of their methods and manners, and latterly show a tendency to charge the teachers with responsibility for the very faults and fissures which inhere in the educational substratum. It seems but just that the

PREFACE

teachers should seek to deflect this charge, and the first three chapters of this book may, in one sense, be construed as a brief in their behalf.

It is clearly impossible for an essayist to make formal acknowledgment of all the sources of his inspiration. The student of education keeps his mind open to the influence of every honest word whether spoken by the thinkers of old or by the seers of to-day, and he keeps his heart open to the influence of the living child, to whom all educational systems owe their existence. And who shall say which speaks the more effectively, Plato and Emerson and Mark Hopkins, or the tow-headed boy in the fourth seat in the third row and the patient teacher who is leading him, helpfully and hopefully, according to her lights?

So I make no attempt to catalogue in full my indebtedness to the many writers and preceptors who have touched me. I must, however, record with pleasure my obligation to Mr. E. W. Fielder for his counsel, especially regarding the statistical work at page 12, and to Professor Henry W. Holmes, of Harvard University, and Superintendent C. N. Kendall, of Indianapolis, for constructive criticism. Finally, it would be an inexcusable breach of duty were I to pass over in silence the names of Miss Mary A. Mason, now principal of Public School Number 79, Brooklyn, and Miss Alice H. Story and Mrs. Jessie N. Mainwaring,

PREFACE

heads of department in Public School Number 85, who have in turn so ably carried to successful fruition the work described in the last chapter. It would be presumptuous for me to offer them any word of commendation; the memory of their service to scores of girls will ever speak to them with a glowing eloquence.

ARTHUR C. PERRY, JR.

BROOKLYN, N. Y., March, 1910.

CONTENTS

	PAGE
PREFACE	iii
PART ONE: PROBLEMS IN ORGANIZATION	
I.—THE ORGANIC STRUCTURE	3
II.—THE CURRICULUM	36
III.—MORAL TRAINING	57
PART TWO: PROBLEMS IN METHOD AND MANAGEMENT	
INTRODUCTION	77
IV.—ENGLISH IN THE UPPER GRADES	
COMPOSITION	81
GRAMMAR	111
V.—HISTORY FACTS	118
VI.—SOME DEVICES IN ARITHMETIC	
THE FUNDAMENTAL OPERATIONS	132
A SPECIAL EXERCISE IN FUNDAMENTAL OPERATIONS	145
MULTIPLICATION DRILL CHART	150
THE MENSURATION OF THE TRAPEZOID	154
LONGITUDE AND TIME	156
VII.—THE USE OF THE BLACKBOARD	161
VIII.—THE SCHOOL MUSEUM	177
IX.—THE ALUMNI	185
X.—THE CARE OF ADOLESCENT GIRLS	199
INDEX	221

PART ONE
PROBLEMS IN ORGANIZATION

I

THE ORGANIC STRUCTURE

CIVILIZED societies have developed many arguments in favor of the proposition of state support of education. Although some of these flow from philosophic and altruistic premises, it is evident that by far the most potent of all arguments is the practical, egoistic one of self-protection and self-preservation. In this the social group is but the analogue of the human individual, for although man has become so civilized a creature that under normal conditions his primal impulses are successfully submerged under the refinements of modern ideals, nevertheless his basic instincts persist and it takes but a little disturbance of normal condition to bring them to the surface.

The most fundamental instinct, the very life-spring of the actions of primitive man, is that of self-preservation. The modern man, in polite society, has inlaid and overlaid this elementary function with a mosaic of modern conventions, so that very many of

PROBLEMS OF THE ELEMENTARY SCHOOL

his acts bear the stamp of genuine altruism. But let there be a disastrous fire on shipboard or in a crowded building, and rapidly indeed do the modern conventions fall away before the ancient impulses. Exceptionally fortunate is the record of such a disaster that does not show scores of men reduced to blind followers of the primal forces. Thus, however much altruism may function in the daily routine of the individual, we cannot ignore the fact that self-preservation and its correlated instincts remain the most potent regulators of the conduct both of men and of nations.

Society recognizes, in general, two distinct requirements as to the education of its members which are necessary to its own proper development, namely, satisfactory, universal, mass intelligence, and a continuous and sufficient supply of exceptional ability. The first of these conditions the existence of the state; the second, its progress. The intelligence of all its members must be kept at so high an average as shall prevent deterioration; the intelligence of a few of its members must so far reach above the average as to insure progressive leadership. In consequence there are to be seen everywhere two phases in the provision of public education, the compulsory phase, and the opportunity phase. These in turn impose the *duty* of education on the one side and extend the *privilege* of education on the other.

THE ORGANIC STRUCTURE

To all its members of worth and promise, the state extends the invitation to avail themselves of the opportunity to pursue the educational privilege to the utmost. America stands foremost among the nations in the richness and fullness of this invitation, in its lavish provision of educational institutions of the highest type. To every young man of ability and determination, however humble his birth, however obscure his ancestral line, however limited his financial resources, there is issued this invitation to a liberal education. The state cheerfully contributes to the support of that education out of all proportion to the immediate return which it is possible for the youth to make—all with the hope as to each particular youth, that he may prove in his maturity to be the one who shall render back to the state in intelligent leadership such service as shall justify the outlay expended upon a hundred of his contemporaries.

This leadership is no more necessary to progress, however, than is an intelligent constituency necessary to that stability which is the prerequisite of progress. Unerring leading could not construct a successful modern state out of an inert and stupid following. For one leader there are hundreds who are led. Whether or not these hundreds appreciate or desire education, the state of to-day gives them no option. Our very stability, our very safety, it says to them, require that

PROBLEMS OF THE ELEMENTARY SCHOOL

you shall not remain unintelligent; although we offer you the opportunity to educate yourselves liberally, we cannot compel you to do so, but we can and will compel you to rise above ignorance and illiteracy. Compulsory education dates back to 1717 in Germany, to 1833 in France, to 1842 in Sweden, and to-day is in effect in some form in nearly every European state. In America, limited but definite efforts in this direction are recorded even in colonial times; and to-day a majority of our American states recognize in their statutes this phase of educational effort.

In general, the compulsory education laws apply only to children between the ages of eight and fourteen, although a few states extend this a year or two in either direction. This means that the compulsory phase of school provision concerns itself chiefly with what we have come to call a "common-school" education, or that grade of our school system which we term elementary, whereas the opportunity phase extends downward to the kindergarten and upward to the secondary school, the college, and the university. Hence we see that the elementary school is unique in that it is the only grade of school in which both the compulsory and opportunity purposes are operative.

The chief problem of the elementary school in America, as abroad, is concerned with the organic structure of the school, and it is intimately connected with

THE ORGANIC STRUCTURE

the primary distinction between the two phases above emphasized. It is true that both phases are officially recognized in scattering records from the Massachusetts Colony ¹ down to date, and yet many a current discussion of the needs of the elementary school is befogged by lack of appreciation of this fundamental distinction in the purposes of the state as related to its schools.

The problem as it exists in America is the converse of that in Germany and in France. A few words in reference to the school organizations of all three countries will help to make this clear. In America, the elementary school, with its course of seven, eight, or nine years, enrolls children from all walks of life, those with every advantage of good breeding and good fortune, and those with the handicap of parental ignorance and incompetency; those of physical robustness and those of physical weakness; those of innate alertness and those with inherited mental inertia; those destined to trade or the trades and those scheduled for a liberal education and the learned professions; in short, every possible type of child in the land. And this because, in the words of our distinguished monitor and adviser, Dr. Eliot, "We are trying to prepare

¹ See Edwin Grant Dexter, "A History of Education in the United States," Macmillan, 1904, p. 584.

PROBLEMS OF THE ELEMENTARY SCHOOL

all American boys and girls for a life of unprecedented freedom—freedom of thought and speech; freedom to travel, to change the place of abode, and to change the occupation; freedom to enter into any sort of public or secret association or union; freedom from everything resembling castes or insurmountable social or political barriers.”¹

To the American turning his thought to the German schools, the characteristic which first arrests his attention is the definition of “higher schools” which there denote, not a higher grade of school in the American sense, but schools of whatever extent of grade, which lead to higher grade work. The lower school is the popular Volksschule with its course normally of eight years; the higher schools are all those which, beginning at the fifth school year or even lower, carry pupils forward parallel to those of the Volksschule but through a different curriculum, and beyond into work of collegiate grade. Somewhat similarly in France, “the division between primary and secondary schools is purely a longitudinal one. . . . The secondary school which begins normally at nine years and continues for nine years has always a preparatory section, so that the child may really enter at six or seven years

¹ Charles W. Eliot: “More Money for the Public Schools,” Doubleday, Page, 1903, p. 57.

THE ORGANIC STRUCTURE

of age and follow work which is of exactly the same nature as that given in the primary school. . . . The primary school in France is in no sense a preparation for the secondary school." ¹

The problem abroad is recognized, as in Germany, where "many of the leaders of the pedagogic world are crying out for the *Einheitsschule*—one school for all—and in some bright spots the system is actually at work. As the barriers of social life in modern Germany are broken down—as doubtless they will be—so will disappear the barriers between the various types of German schools." ² Part of the criticism of the German schools is that "it is as difficult for a lad to pass from one school to another as in German social life it is to rise from one class of society to another," although it is admitted that "this statement may seem too general." The assumption seems to be made by the German reformers that the establishment of the *Einheitsschule* is their salvation.

The American problem is the converse of this. We have the *Einheitsschule* and are beginning to awaken to a realization of its inadequacy and imperfections.

¹ Frederic Ernest Farrington: "The Public Primary School System of France," Teachers College, Columbia University, 1906, p. 12.

² R. E. Hughes: "The Making of Citizens," Walter Scott Pub. Co., 1902, p. 8.

PROBLEMS OF THE ELEMENTARY SCHOOL

We may state the criticism of our present system, perhaps not too strongly, as follows. Into the same school, into the same classroom, we thrust those pupils to whom we wish to extend the opportunity of seeking a liberal education and also those others, in the substantial majority, upon whom we are placing the duty of securing that minimum of instruction consistent with proper usefulness in a republic. We place these two groups of pupils, with such divergent interests, into the same classroom, under the guidance of the same teacher, and put them through the same curriculum, and then wonder at the confessed failure of the public school to prepare great numbers of its pupils for life.

The influence of the college has been exerted upon the secondary schools to the end that they may properly and adequately prepare their pupils for college entrance. The secondary schools have extended that influence and pressure down upon the elementary schools demanding that they shall make adequate preparation for the high school. The elementary school has consequently turned itself into a preparatory school for high schools. In recent years we note a tendency upon the part of some of those responsible for elementary school organization and direction to assert their independence and to consider their charge upward from the child and not downward from the

THE ORGANIC STRUCTURE

college. Immediately we turn our faces in this direction we discover that the pupils of our elementary schools are not preparing for college, have no thought or desire so to prepare, and in most cases lack the innate ability so to prepare. This, with the exception of a small group of pupils; how small that group is we scarcely realize until we consult the statistics and there find that ninety per cent of our pupils never go beyond the elementary school grade.¹ Only ten per cent are scheduled for the secondary school and but one tenth of these for the college.

Yet the casual observer of our schools might be warranted in supposing that we were all quite blind to this statistical fact, for here we are, pushing ninety per cent and ten per cent alike through the identical curriculum. And why? Because of our peculiar concept of democracy; because of our strange belief, as a people, in the efficacy of law and education to equalize the unequal; because of our mistaken loyalty to our democratic ideals which makes it almost a crime to suggest that *natural* caste can and must exist even in a republic. Year after year we see pupils whose earthly destiny is to walk humbly in the nonscholastic paths of life, compelled to spend an allotted period inside of

¹ Cf. "The work of the elementary schools is not to be shaped with special reference to preparing pupils for college, because more than ninety-five per cent of all the pupils of the elementary

PROBLEMS OF THE ELEMENTARY SCHOOL

the schoolhouse, released at last, disgusted with school life, and yet ill fitted for the real life which lies before them.

We have mistaken our duty to these thousands; we

schools never go beyond them."—Andrew S. Draper, "American Education," Houghton, Mifflin, 1909, p. 129.

The enrollment of pupils for 1907-8, according to the Report of the Commissioner of Education, Washington, 1908, p. 22, is as follows

	In public schools	Plus those in private schools
Elementary.....	16,069,305	17,373,852
Secondary.....	771,687	961,786
Universities and colleges.....	53,623	149,700
Professional schools.....	11,517	63,256
Normal schools.....	62,428	70,439
	<u>16,968,560</u>	<u>18,619,033</u>

This shows a distribution of enrollment as follows:

	In public schools	In public and private schools
Elementary.....	94.7%	93.3%
Secondary.....	4.6%	5.2%
Universities and colleges, profes- sional schools, and normal schools.....	<u>.7%</u>	<u>1.5%</u>
	100.	100.

These percentages show the proportion of pupils found in the various grades at a given time, but they do not properly indicate the proportion of pupils who go forward from one grade to another. That is to say, the statement that at any time ninety-four per cent of our pupils are in the elementary schools is not

THE ORGANIC STRUCTURE

have argued that because democracy has formulated the ambitious programme to try "to prepare all American boys and girls for a life of unprecedented freedom, etc.," it is disloyalty to see the self-evident, to

equivalent to the statement that ninety-four per cent of the elementary school pupils do not go beyond them.

To calculate the percentage of pupils who go beyond the elementary school, it is necessary to ascertain, first, the total number of pupils entering school in a given year, and second, the number of *those* pupils who, some years later, enter secondary schools. In the absence of these exact figures, it will be approximately correct to substitute for the first, the number of all pupils in the United States found, in any given year, in the first-year grade of the elementary school, and for the second, the number of all pupils in the United States found, eight years later, in the first year of the secondary school. Even these figures seem unobtainable at the present time; hence, a further approximation must be made.

The following deduction is submitted, based upon statistics from the reports of the United States Commissioner of Education.

The most recent figures for high school enrollment are for the year 1907-8 (Report, 1908, p. 859), when there were 770,456 pupils enrolled in the public high schools.

In 1906-7 there were in 7,624 of these high schools, enrolling 667,305 pupils, 288,748 pupils in the first year, or 43.27 per cent (p. 862). Assuming the proportion to hold for the following year for all schools, there were 333,386 pupils in the first year of the high school. These pupils presumably entered the elementary school, on an average, eight years prior to 1907-8, or in the year 1899-1900.

The total enrollment for the year 1899-1900 in our public elementary schools was 14,821,969 (Report, 1903, p. xix). Figures

PROBLEMS OF THE ELEMENTARY SCHOOL

admit that, as a matter of frigid fact, the average American boy or girl simply cannot have a life of unprecedented freedom. We establish our premise: any boy or girl qualified to secure and appreciate a liberal

as to the distribution of these pupils among the various grades are not at hand, but for the year 1902 they are given (Report, 1903, p. xvi) as:

First year or grade.....	5,149,296
Second.....	2,912,462
Third.....	2,426,263
Fourth.....	2,168,956
Fifth.....	1,288,114
Sixth.....	700,885
Seventh.....	405,693
Eighth.....	323,607
Total.....	15,375,276

This shows 33.5 per cent of the pupils in the first-year grade. Assuming that this percentage held for the year 1899-1900, there were in that year 4,965,360 pupils in the first-year grade.

Roughly speaking, then, the 350,000 pupils now entering our American high schools represent a survival of seven per cent of the 5,000,000 pupils who entered school eight years ago.

It is quite probable that the figure 5,000,000 somewhat overestimates the *admissions* to the elementary schools for one year. I have chosen, therefore, to make a most conservative estimate, and to assume that 3,500,000 more closely states the fact. This would amply justify the statement used in the text that ninety per cent of our pupils do not go beyond the elementary school. For all the purposes of the argument of these three chapters, this statement is sufficiently accurate; indeed, it might be widely aberrant without invalidating that argument.

THE ORGANIC STRUCTURE

education should be offered every opportunity to prepare for that education. Only in very fine print, as a footnote, do we observe that only one boy or girl in every ten is so qualified. Then we debonairly jump to our conclusion: therefore, every boy or girl should be made to prepare for that education. Again, only in fine print do we note that nine of the ten leave us with only this "preparation" for something which they cannot have, and which nearly everyone knew all the while that they could not have; and what is more unfortunate, they leave us without having made proper preparation for that which is their inevitable work in life.

It is surely time that we should cease to deceive ourselves or attempt to deceive others with the theory that because we call our nation a democracy, a republic, a United States, there results a transformation in the intrinsic quality of the children of the nation—a transformation claimed for the children of no other country the world over. It is indeed a false conception of democracy, and a mistaken notion of loyalty, which proceeds on the theory that this—a mere form of government—can in itself affect the fundamental distinctions that exist in human individuals, however much it may be credited with having ameliorated the conditions of existence for the average man.

PROBLEMS OF THE ELEMENTARY SCHOOL

The continental problem is to reform the caste school and approach the *Einheitsschule*; the American problem is to reform our wantonly simple *Einheitsschule* so that natural distinctions shall be rationally recognized. The continent cannot solve her problem by taking over the American universal school; America cannot solve her problem by transplanting to her soil the German school, or the French, or the Swedish, or any other. Each nation must work out its own salvation with due deference to the national traditions and the national institutions, and yet each nation must cast aside provincialism and complacency and accept from its fellow nations whatever may be received with profit.

We may certainly benefit from the continental experience. In Germany, the man whose social and financial position is such as to guarantee his inability to give his son a liberal education sends him to the people's school, where he is frankly accepted as he accepts himself, as one in need of such training as shall best prepare him during his few school years for the work of his life as it is bound to be, and not for the work of some other boy's life as it may be. His daily work in the classroom is not interrupted by the presence of boys scheduled for a university career. Such boys are early diverted into schools which specialize for them, and their progress is not impeded by the

THE ORGANIC STRUCTURE

pace set by pupils uninterested in acquiring an education for which they can have no reasonable use.

It is true that we must recognize that in America social orders are much more fluent than abroad, that the cobbler's son of to-day may to-morrow be the mayor—alike for shoemaker and scion. But the fact is that the criticism of the continental arrangement rests not nearly so much in the presence of separate schools for separate needs of the people as in the charge of a tuition fee in the higher schools, while the people's schools remain free. It is really this fee which accentuates caste abroad, and not the school organization. We have already put our public schools of all grades on a no-tuition basis, so that we are in little danger of ever falling into this form of caste-encouraging blunder.

Even under our present organization we have come to recognize the need of differentiation in high-school work, but in providing distinctive courses we certainly have sacrificed none of our democratic freedom nor have we in any measure encouraged caste. Ask this boy which high school he attends or which course he is pursuing and he tells you the classical school or course; ask the boy next door the same question and he replies no less proudly—surely with no thought of self-depreciation—that he is taking the commercial course. Wherein has caste been established? It

PROBLEMS OF THE ELEMENTARY SCHOOL

would be a very different matter if, following continental custom, we offered one of the courses free to all and charged a fifty-dollar fee to the other groups of students. Then might the one student look down with assumed superiority upon the other; but it is just at this point that our sane American democracy intervenes to save us from any such anticlimax. In our attitude toward our high-school students we have learned to estimate with equal dignity and appreciation all honest workers, in whatever department they are found. It remains for us to carry this same spirit into our treatment of the elementary school problem.

Our problem, then, is so to reorganize our American schools that the child who is scheduled for six or eight years of schooling and then an immediate entrance into vocational life shall be given an education that shall be his, and not the education that belongs to the child who has before him a university career and the preparation therefor. The resultant organization must give to each of these two great groups, and to all of those intermediate to these, that education which fits its special needs. It must provide for the great ninety per cent for whom education is a duty, and also for the important ten per cent for whom it is a privilege; and must so provide by intelligent differentiation and not, as now, by the offering of a universal hodgepodge. Moreover, it must be so flexible as to

THE ORGANIC STRUCTURE

permit the exceptional child to transfer from one of these groups of pupils to another upon occasion; this is of prime importance, for we must not subject ourselves to the criticism now fairly leveled against the continental systems in this respect.

No doubt exception will be taken in many quarters to the use of the word *scheduled*, but it has been employed advisedly in the preceding paragraph. Many of our American educational thinkers shrink from using such a word as this on the ground that no American child is to be considered as scheduled for any career until he schedules himself. We are not justified, they say, in assuming in advance that his educational programme is in any way limited. Now the present criticism is that the contrary assumption is an unwarranted one because it is an ideal one, and that our present school organization is built upon this imaginary ideal instead of upon a known state of affairs. We are forced to admit that the actual condition is this: that only a tenth of our children take advantage of the opportunity phase of the state's educational purpose, while the entire after life of the remaining nine tenths is built upon the schooling of the elementary grades only.

It is of course conceivable that a supersocialistic government might take over the entire nurture and education of all the children of its people, leaving

PROBLEMS OF THE ELEMENTARY SCHOOL

little or nothing of responsibility to the individual parents. In that case each child might be so successfully evaluated as to result in his receiving the education which exactly fitted his innate ability; and we can imagine further that under this form of paternalistic government, ninety instead of ten per cent would be given a secondary schooling. But why speculate upon an all-providing government which has, and can have, no actual existence? And why maintain a school organization founded upon some such speculation?

The fact is that every child, short of those subject to charity, is dependent upon the material prosperity of his parents for the measure of his scale of living. His clothing is costly, his fare is elaborate, his housing is luxurious, all in proportion to the ambition and ability of his parents to provide these for him—and it is the same with his education. There comes a time in his life, of course, when he is thrown more, if not entirely, upon himself, when either through his own industry he manages to provide more lavishly for himself, or else through his own inertness he loses some of what he has been enjoying at his father's expense.

The average father estimates himself pretty accurately. The moderate wage-earner to-day, whatever his hopes, knows that, for all practical purposes,

THE ORGANIC STRUCTURE

he must assume that eight years from now he will still be a moderate wage-earner. He knows that if his six-year-old boy were to-day fourteen, it would be out of all question for him to support him longer as an unproductive member of his family; and he knows that the chances are many to one that the same will be true when his child has actually reached the age of fourteen. He clearly recognizes this fact and we have no right to ignore it. Moreover, we may recognize it without yielding one point in our devotion to the true ideals of our American democracy. We may recognize it without assuming that the boy must necessarily follow his father's trade; we may recognize it without charging the father with neglect of duty or even implying the charge; we may recognize it without relegating the boy or his family to the position of a subordinate caste; above all, we may recognize it without injury to the occasional boy who decides for himself that he will, through his own efforts, pursue education beyond the point marked by his father's interest or ability to provide.

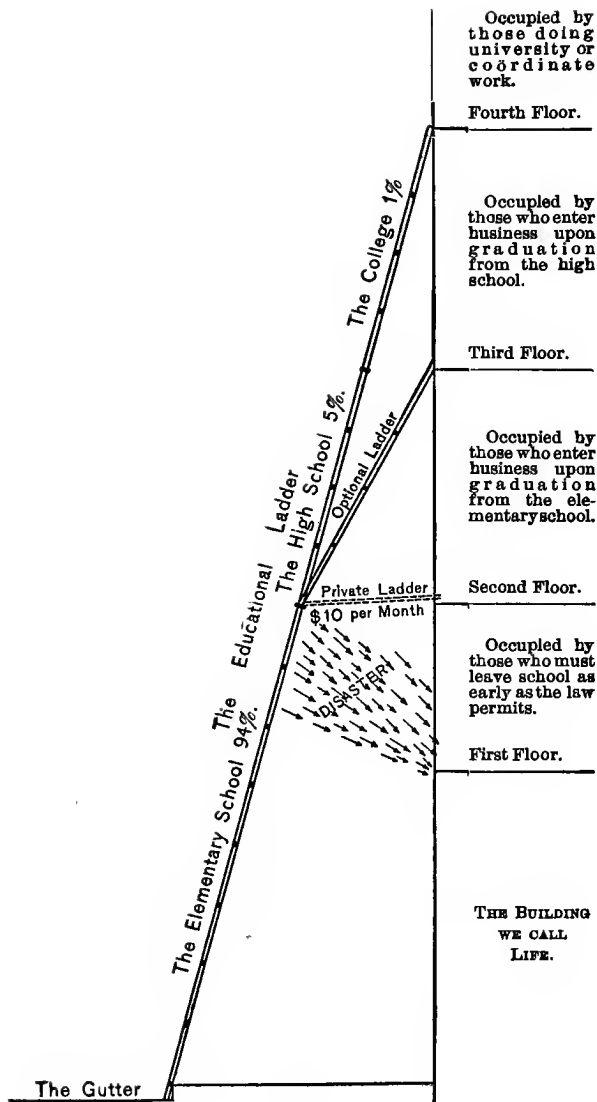
We have too long accepted Huxley's figurative description of our school organization as "a great educational ladder with one end in the gutter and the other in the university." When we recover from the anæsthesia induced by the implied compliment and begin to study the picture, the fact is revealed that

PROBLEMS OF THE ELEMENTARY SCHOOL

our children are climbing this ladder with some rather disastrous results. We see the ladder with one end planted in the "gutter," if you will have it so, and the other end leaning against the university portal. Below the university floor in the house of life, however, are several others, the high-school graduates' floor, the grammar-school graduates' floor, the elementary vocational floor; and as we come down through the building we notice that the crowd increases wonderfully until you find some four fifths of all the inhabitants occupying the first floor. But the curious thing is that as you come down, the ladder stands farther away from the building. Shall we picture it a little more clearly? (See diagram p. 23.)

The disaster is shown in the thousands of children who are jumping or tumbling from the educational ladder to the first floor, landing approximately upon their feet rather by virtue of the natural toughness and agility of the human youth than by any foresight of our school administration.

We notice two saving features in this diagram in the form of two supplementary ladders. Our typical secondary schools offer to their students a variety of courses so that they may prepare either for college or for the business life which lies before them at the end of their high-school career. They may choose the appropriate ladder before mounting, and on it climb to



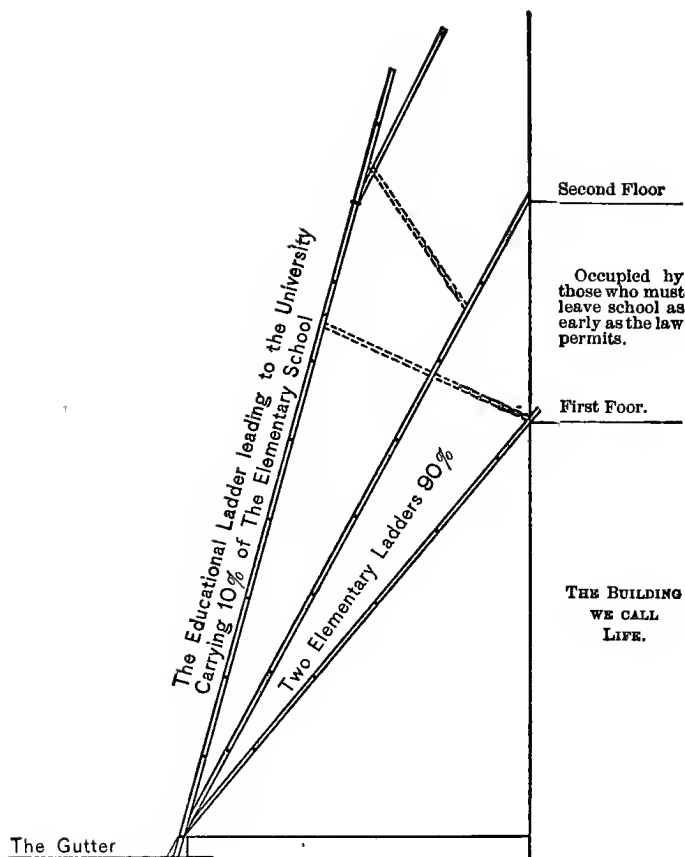
PROBLEMS OF THE ELEMENTARY SCHOOL

their natural goal. It is true that there are a few students who, going through high school with the expectation of passing on to college, find that the college course, for some personal reason, is closed to them. These must jump to the nearest life platform, but there are considerably fewer making the jump, and the jump is not so long a one as in the great disaster nearer ground.

The other cross ladder is a private one, but one employed by thousands of boys and girls who have been marooned on the big ladder, who dislike the flying leap to the first floor, and whose parents, having already paid a school tax for something they did not want, yet have enough left over to buy that which they do want. This ladder is the private commercial school, thriving throughout the land,¹ which takes the graduates of our public elementary schools and proceeds in a few months to teach them to write a business letter and to add a column of figures.

Now both of these short ladders have proven to be safe and serviceable and are already in a position of stable equilibrium. Why shall we be so timid about running out one or two more? Why not run one di-

¹ Over 150,000 students were enrolled in commercial and business schools in the United States, 1907-8.—Commissioner's Report, 1908, p. 930. This does not include the great number reached by the correspondence schools.



rectly from the gutter to the first floor and another from the gutter to the second floor? For fear—and this seems to be the only substantial argument heard against it—that there may be a few soaring souls who, finding themselves well up one of these ladders, discover that they ought to be on the university ladder. They may easily be accommodated by giving them a public return ladder, or they might be left to patronize private ladders as we now leave so many to do who are traveling in the opposite direction. Compare this proposed arrangement with the present. (See diagram p. 25.)

We have eliminated the great disaster, and at the worst, we have substituted for the private ladder, carrying thousands, another private ladder—though we might well make it a public one—carrying scores. Is this to be construed as an unwarranted assault upon the bulwarks of democracy?

It may be that experiment would prove that it is not necessary to start the supplementary ladder from the gutter in order to secure the best results at a minimum of stress in reorganization. Very likely all groups of pupils might be kept at the same work at the same pace for the first two, three, or four years of school. As to this, however, we can make no dogmatic prophecy. We are bound to suspend judgment on this point until sufficiently extensive experimentation

THE ORGANIC STRUCTURE

provides us with adequate data upon which to generalize.

The National Education Association, at its 1909 convention, unanimously adopted a "Declaration of Principles and Aims" which throughout breathes a noble spirit of democracy. "Our free schools," it says, "must advance along the lines of educational democracy in the sense that they must provide equal educational opportunities to all." However hearty may be our assent to this statement, it still remains for us to make a conscientious attempt to discover in what "equal educational opportunities" really consist. Certain it is that we are not giving such equal opportunities when we say to ten per cent of our children "The education you desire is freely yours," and to the ninety per cent "You, too, are welcome to as much of this education provided for the ten per cent as you care to take, but you must not expect anything meeting your distinctive needs." Indeed, this bears all the marks of a purpose to establish caste, although we well know that such a purpose has been farthest from the thoughts of the organizers and administrators of our schools.

This, then, is the greatest, the fundamental problem of our elementary schools. Until it is solved the most important of our other problems stand in abeyance. In particular, the problems of the curriculum

PROBLEMS OF THE ELEMENTARY SCHOOL

and of moral training are irrevocably dependent upon this one. Or, to make a better statement by transposing the equation, an overwhelming difficulty is introduced into the solution of these two problems by our failure to recognize this fundamental defect in our school organization, and the pity of it is that this disturbing factor may readily be eliminated. For the repair of this defect is entirely a question of sentiment, intention, and authority; in the working out of the details it would seem to present no serious technical difficulties.

It is a question of sentiment because educational leaders have not yet learned to face bravely such facts as this: the American child does not schedule himself; he is scheduled by heredity and by circumstance. It is a question of sentiment because as yet the call of the demagogue meets so large a measure of unthinking response when he talks glibly of a liberty, fraternity, and equality, the truest and highest interpretation of which is beyond his own powers of imagination. It is a question of intention because once the American people sense the defects in their school organization, they will set about to repair it. It is a question of authority because once they determine to perfect the organization, they will command their educational officials to do the work.

Once given this command, this authority, based

THE ORGANIC STRUCTURE

upon the aroused sentiment of the people, our school administrators will have little difficulty in working out the details of reorganization.

The movement of our pupils along the educational rails is a matter of routes and speeds. We must first reform our routes so that each pupil is taking approximately that one which leads to his normal destination. In this we must reform our curriculum for both the child booked for the secondary route and the one booked for the elementary route. As to the latter, I have reserved the second chapter for a discussion of his needs. As to the former, only a hint of possible reform is here given and that by a single illustration. The French and the Germans have satisfied themselves that the time to start the boy on his secondary route is not at the end of his eighth school year but at the end of the fourth. One result is that the German gymnasial student, for instance, is given in his fifth school year eight periods a week of Latin or six periods of French. Contrast this with our American scheme which keeps our boy waiting four years before he gets his smattering of a foreign language.

Next we must reform our speed laws. The struggling and sincere attempts already made to solve this problem of speed regulation foreshadow what might be done in this respect if their authors had freedom

PROBLEMS OF THE ELEMENTARY SCHOOL

of manipulation commensurate with the gravity of the problem. It is needless to review here any of these schemes; they must at best remain makeshifts until we strike deeper at the problem and get authority to use our schoolhouses, our school materials, our school moneys with the same degree of freedom which the trainmaster has in directing the movements of his rolling stock and equipment.

We have long been accustomed to regard man in his threefold make-up, mental, moral, and physical. So long have we had this trinity of words incorporated in our daily speech that we have grown careless in their use and prone to overlook their vital significance. Only in recent decades has there been in school management a practical recognition of the necessity for a balanced culture of these three attributes. Mental training has taken a long-distance precedence over moral nurture and physical development in every consideration of our public schools. To offset this, however, there is evidenced to-day a very determined effort in many directions to reduce the emphasis usually placed upon the training of the intellect and to divert a proper amount of attention to physical and moral development. This is in part due to the recognition of the inevitable interdependence of the three phases, as we find it stated in such self-evident propositions as that an unsound body cannot ordinarily support a

THE ORGANIC STRUCTURE

sound mind, that moral delinquencies may be due to physical deficiency, that the intellectual giant may yet be a moral coward, etc.

Of these three groups of problems, that dealing with the physical welfare of the child seems most hopeful of solution. In the first place, this is the only one of the three groups which is in any measure—though not entirely—independent of the organic structure of the school system. The hygiene of the child who is set at the wrong intellectual tasks or is put to doing his work in the wrong way is not so very different from the hygiene of the child who is undergoing a normal mental training. Hence, whatever reforms must yet be made in the direction of school hygiene and physical culture need not wait upon the reform in school organization.

Moreover, there are few unsettled points along the line of progress in physical education. The laws of physical growth have been well established and clearly formulated, there is a large and powerful body of medical experts constituting the natural leaders in the movement for improvement, and there is little room for argument as to the proper hygienic conditions under which people should work. As fast as the state makes the necessary financial outlay for bettered conditions in respect to physical education and physical environment, those betterments can be materialized, for the technical difficulties are few. We have such

PROBLEMS OF THE ELEMENTARY SCHOOL

encouraging signs as the organization of the American School Hygiene Association, in 1907, and of kindred influences, working for improvement in material school equipment. It is evident that the idea of formal gymnastics as a necessary means to physical training is increasingly accepted as a part of pedagogic dogma. In the language of Dr. Payne, "it seems fairly settled in the public mind that the school shall provide for the child a physical training to parallel his mental training. . . . Evidently the time has already come when a school to be called progressive must make provision for some sort of physical culture."¹

Doubtless there is need for conscientious study of pedagogic technique on the part of teachers and directors of physical culture, but it may be safely assumed that no one more fully recognizes this need than they themselves. It may be many years before the rights of the child to his physical education are fully assured to him, but annually our schoolhouses are improving in quality, our people are more and more appreciative of the importance of hygienic protection and physical training, and our communities are increasing their financial support of the public schools. Along this line we may well be optimistic in our hope for the future.

¹ Bruce Ryburn Payne: "Public Elementary School Curricula," Silver, Burdett, 1905, p. 24.

THE ORGANIC STRUCTURE

But when we turn our attention to the other two phases—mental and moral development—we are inclined to be less sanguine. For both of these are intimately dependent upon the organic structure of the school system, and so long as that structure stands aslant we cannot hope for rectangular solution of the problems of mental and moral training. As to the latter of these we must note, as an additional difficulty, that the proposition that moral training is a legitimate function of the public school is by no means established. Dr. Butler proclaims that "That democracy alone will be triumphant which has both intelligence and character. To develop them among the whole people is the task of education in a democracy." ¹

Other writers drive home this same thought, as for instance Hughes and Klemm, who say: "Every school must have a twofold object, (1) to give technical knowledge and train the intellect, and (2) to ennoble the soul and establish character." ² The pulpit preacher and the lay speaker reiterate, amplify, and vivify this proposition day after day. We cannot say that they are unheard, nor that thoughtful men do not

¹ Nicholas M. Butler: "The Meaning of Education," Macmillan, 1906, p. 101.

² "Progress of Education in the Century," Linscott Pub. Co., 1907, p. 447.

PROBLEMS OF THE ELEMENTARY SCHOOL

promptly accept the thesis that character training should be a vital aim of the school.

But who would venture the assertion that the average man is very effectively impressed? It is to be feared that to his mind the school is, in return for his taxes, to teach his boy arithmetic, not integrity; writing, not righteousness; reading, not religion; and mental acumen, not moral insight. And can we much blame him so long as the school itself seems to take this view; so long as the school officer continues to ask of the teacher, "Why did your class get only 69.3 per cent on this grammar test when the general average was 70.1 per cent?" and never thinks of asking, "What gain in honesty and self-control have you effected among your boys this term?"

If we were willing to accept as the idea of moral training, of character building, the usual content of the pedagogue's time-worn term *discipline*, we would have to admit that the school is permeated with the distinction between intellectual and moral culture. Indeed, instruction and discipline are universally contraposed in pedagogic thought and we even go to the length of "rating" a teacher in each of these separately. But so long as discipline in the school sense is merely synonymous with control—such control as is exercised by the animal trainer over his

THE ORGANIC STRUCTURE

charges—we cannot admit that true moral training has far advanced.

Having distinguished between mental and moral training, we are immediately impressed with the absence of any consensus of conviction as to the treatment of either phase. In this they differ from the physical phase: for instance, we well know that the pupil's eyes must be protected—he must not read badly printed text-books, he must not work facing the windows, he must not write in incorrect posture, etc.—all of this and very much more is axiomatic. But there is no great body of axioms covering the training of the intellect and the will. Hence, both the curriculum and moral training, the formulæ through which we seek the development of intellect and character, must be regarded as problems which, so long as they remain unsolved, are legitimate subjects for discussion.

In the two chapters following, the relation of these problems to the fundamental one of the form of school organization will receive foremost consideration.

II

THE CURRICULUM

DURING the many decades which have elapsed since our public elementary schools first took form, "the curriculum has undergone many modifications, and received additions, until it has lost all resemblance to its former self."¹ "From the testimony of men who were educated in the common schools prior to 1800, it appears that the course of instruction was limited to spelling, reading, writing, and the elements of arithmetic."² This seems meager indeed when compared with our present-day elementary curriculum.

The development of the course of study in the direction of the inclusion of new subjects is significantly presented in the comparative tables which appear³ in Dr. Payne's interesting and valuable study, "Public Elementary School Curricula," without appreciative reference to which any discussion of the subject would be shamefully lacking. In these tables are compared the curricula of 1868, 1888, and

¹ Dexter: *op. cit.*, p. 155.

² *Ibid.*, p. 156.

³ P. 53, *et seq.*

THE CURRICULUM

1904, for each of the five cities, New York, Boston, Chicago, St. Louis, and Louisville. Perhaps the most striking change revealed is in the case of St. Louis, where, in 1868, the course consisted of but seven grades. Reading, arithmetic, physical training, and singing appeared in all seven, and writing in all but the first; spelling was provided in three grades, declamation and geography each in four; while grammar and history for the seventh year only, completed the list. In 1904, in an eight-year course, reading, arithmetic, physiology, and singing, as before, together with writing and four new subjects—morals and manners, language, nature study, and drawing—making a total of nine subjects, are found in all grades. Geography has extended to six grades, history to two, and spelling to seven, while grammar and declamation as separate subjects have disappeared.

We may note a corresponding variation among the courses of study of the present day throughout the different cities. For instance, in addition to the orthodox subjects, Boston introduces bookkeeping; Chicago, German and Latin; Kansas City, civil government; San Francisco, cooking; New York, civics, algebra, English history, and options in foreign languages.

The changes in the content of the curriculum, variant both as to time and locality, have not been brought about except after strenuous conflict between

conservative and radical forces. Circumagitating this conflict, which has by no means ended, there has developed a technical terminology to which passing reference must be made.

The utilitarian aim in public education has so strong a grip upon popular opinion and sentiment as to have incorporated into our daily speech the expression "the three R's," used to represent the alliterative staples of the old curriculum, reading, writing, and arithmetic. In more refined circles this is replaced by the term, "the essentials," which at once has the advantage of saying less and meaning more, and so is gratefully received into the polite society of pedagogic parlance. The essentials have been alternately lauded and anathematized, yet the fact remains "that to-day, even after all our talk about the new education, the three R's are in the ascendancy."¹

Another way of indicating the contention between conservatism and radicalism is to distinguish between the "form" and the "content" studies. Included in the former are those of the old discipline, such as arithmetic, spelling, and writing; and in the latter, those of more recent introduction, such as geography, literature, and history. Although the reformers have been persistently attacking the preponderance of the

¹ Payne: *op. cit.*, p. 22.

THE CURRICULUM

formal studies in the curriculum, the programmes for ten typical cities ¹ show "that the formal studies receive sixty-two per cent of the assigned time, while the numerous studies known as the content studies receive but little more than thirty per cent." ²

Yet another style of referring to the demands of the reformer is to refer to him as pleading for "enrichment." New York stands preëminent among the cities for the high degree ³ of enrichment of its course

¹ New York, Boston, Chicago, Cleveland, San Francisco, Columbus, Ga., Louisville, Jersey City, New Orleans, and Kansas City, Kan.

² Payne: *op. cit.*, p. 39.

³ The New York curriculum boasts twenty-five subjects, of which twenty-one are compulsory. They are:

- | | |
|---------------------------|------------------------|
| 1. Physiology and Hygiene | 14. English History |
| 2. Organized Games | 15. Civics |
| 3. Composition | 16. Arithmetic |
| 4. Reading | 17. Algebra |
| 5. Memorizing Selections | 18. Geometry |
| 6. Grammar | 19. Nature Study |
| 7. Spelling | 20. Elementary Science |
| 8. Penmanship | 21. Drawing |
| 9. German | 22. Sewing |
| 10. French | 23. Cooking |
| 11. Spanish | 24. Shop Work |
| 12. Geography | 25. Music |
| 13. United States History | |

Only one of 9, 10, or 11, optional with 12, in eighth year.

Only one of 23 or 24, in seventh and eighth years; 23 for girls, and 24 for boys.

of study, and the question arises, in the words of Dr. Payne, "Will the New York curriculum in its extreme movement toward what are known as the content studies be followed by these superintendents [of other large cities], or will New York under force of popular conservative opinion be forced to retreat from its present curriculum?"¹

Let us glance at both sides of the question. We may look upon the enrichment of the curriculum as the result of a philanthropic desire to set before the elementary-school pupil a more varied diet than he otherwise would enjoy. Not only shall he be fed the meat and potatoes of the essentials, but these must be supplemented with entrées and desserts in the form of content studies, so that when he arises from his educational repast he shall have no epicurean desire unsatisfied. Now the chief danger from such a diet is that the subject may, through the continued gustatory appeals, partake too freely. Moreover, in his eagerness to get all that is put before him, or what is more likely, in the zeal of his servitors to have him not miss anything on the table, he is quite likely to bolt his food and in consequence suffer severely from indigestion. A too highly enriched curriculum meets its chief objection in the danger that a chronic mental dyspepsia will seize the child.

¹ *Op. cit.*, p. 62.

THE CURRICULUM

State it less figuratively and a little more concretely. I put my son into the care of the pedagogue. He tells me that the boy must learn to read, to write, and to cipher, to which I cordially assent, and he proceeds to instruct him in these important articles of faith. But presently, of a summer's evening, as I sit out in the open under the starlit dome, with my nine-year-old on my knee, I find myself discoursing with him of planets and satellites and comets and meteors and signs and seasons, in all of which he seems much interested. I know that the hour is a delightful one to me and surmise that it has been equally so to him.

Then the next day, as I recall my own pleasure and the boy's delight and interest, I grieve to think that not every boy can sit out an evening with his father and listen to the music of the spheres; and I wonder why the schools cannot do something for the other boy, and for my own, too, for I am unable to spend every evening with him and the stars, and so I pass my thought on to the pedagogue. "Why certainly," says he, "we ought to teach astronomy. It is very important and instructive; no intelligent man should be uninformed in the subject; I will introduce it at once." And next there is complaint that my son has neglected his homework in astronomy, and that he had only 57 per cent in the last examination in that sub-

PROBLEMS OF THE ELEMENTARY SCHOOL

ject. Exaggerated? Yes, certainly. No elementary school schedules astronomy as a formal subject? I know that, of course. But, after all, is this so very far from illustrating the spirit which has prompted our campaign of enrichment?

To have a first-hand acquaintance with the natural environment is very desirable, very desirable; the more we repeat the statement, the more convinced are we that it is not only very desirable but absolutely indispensable. Yes, "nature study" *must* go into the curriculum. And the laws of physics, an understanding of which is so necessary to a proper interpretation of the moving world about us; and the history of England, a knowledge of which is so essential to a proper appreciation of the history of our own country; and the elements of algebra, without which we cannot get a glimpse of the glories of higher mathematics—all these subjects, and many more, *must* be added so that the child may not be deprived of anything which may have a possible value to him in either a practical or a cultural sense. And so he is jerked from forty minutes of this to twenty minutes of that, to thirty minutes of something else, essentials and non-essentials all held officially imperative, until at the end of the school day he is released, merely to transfer his activities to his home, with an armful of text-books and the demand for the production of a

THE CURRICULUM

bulk of "home work." Can we wonder that the average boy or girl finally goes forth from our elementary school possessed of an ill-digested jumble of facts and fictions, Jack of all subjects, but master of none? This, then, is the case against the enriched course of study.

But this is only one side of the question. If enrichment has its risks, certainly impoverishment is not free from danger. If we seek relief from overfeeding and indigestion, we cannot find it in malnutrition. The child for whom school means nothing but a ceaseless grind in the machine shop of the formal studies is deserving of the same pity which we accord the child employee of any other factory. No wonder that contemplation of him has incited the indignation of the reformer. No wonder that in the name of Childhood our curriculum has been wrested from the clutches of those who would make of it a treadmill. Much of the criticism of the curriculum-enricher is the natural outbreak of the taskmaster protesting against the demand that he shall learn new arts and new manners. This protest takes the convenient form of attacking the "fads." Indeed, as some one has said, the chief fad of the day is pounding the fads. But no epigrammatic assault upon the new education is going to result in a return to the three R's as the sole substance of the curriculum. If the case against excessive en-

PROBLEMS OF THE ELEMENTARY SCHOOL

richment is strong, surely the case against complete impoverishment is equally strong.

Like many another educational problem, this of the curriculum has both its ideal and its practical phases. The closet philosopher may evolve a paper curriculum which proves flawless when tested by even the highest ideals of the educational theorists. The private tutor responsible for the progress of one or two children in a wealthy family may devise a course of study for his wards which may quite measurably approach the ideal schemes offered by the philosophers. But the school board, face to face with a city public-school system, encounters a very different problem. Here, as in so many troublesome places in school administration, the root of the difficulty is financial, and, carrying out the figure, two main branches are the burden of large classes and the handicap of untrained teachers.

Of course each of these terms is used comparatively; a large class is large only when contrasted with a smaller one, and an untrained teacher is untrained only as we consider him less trained than another. Just what shall constitute a normal class as to size or a normal teacher as to training, is open to argument. But it is evident that in order to increase its standard in either respect, a school system must spend more money. As compared with present conditions, con-

THE CURRICULUM

sider a school system wherein all teachers possessed a professional training equal to that of our best trained physicians, and wherein no class exceeded fifteen in number. Without doubt the expense would be at least quadrupled, but can we not also assume that there would be a commensurate increase in effectiveness? Many a curriculum, now existing only on paper, could then be materialized in the minds and hearts of the children. But the mere hope that we may some day have such favorable conditions is not sufficient to warrant us in prescribing a curriculum keyed up to those imaginary conditions, but actually to be used under practical conditions several tones lower in the scale. Let us then avoid utopian visions and keep to the practical view of the problem.

We have already noted the fact that ninety per cent of our public-school pupils do not go beyond the elementary school. For the ten per cent who do, it may be that the average course of study is fairly well adapted, though this may be questioned. At any rate, in recognition of the limits of the present discussion, we will not give the point further attention. Rather, let us consider the ninety per cent—one would naturally suppose that these would enlist the chief interest of the school administrators when they manufacture courses of study—and examine more closely into what is the opportunity which ought to be offered these pu-

PROBLEMS OF THE ELEMENTARY SCHOOL

pils. The hasty sketch which we have already drawn of the conflict between the opposing protectors of the curriculum has foreshadowed the fact that this offering should be of two distinct kinds.

Our first duty is to train the child in the use of certain tools in order that he may qualify for an intelligent and profitable share in the world's work. He must learn to read and to write. These two essentials, which include spelling, should be studied until they become habits, until there is an immense group of automatic reactions set up, so that the printed word calls forth easy and rapid rendering either orally or mentally, and the need for expression impels the hand to write in accordance with form conventional as to spelling, penmanship, and the arrangement of a social or business letter. Added to these are certain other elementary habits which must be acquired. One of these is the ability to express oneself in well-formed sentences, without hesitation and without violation of the ordinary rules of grammar. Another is the ability to perform simple arithmetical computations and to reason rigorously in simple practical problems involving numbers. A thorough development of these habits will enable a child forced into the business world at the age of fourteen to offer a satisfactory groundwork upon which his employer can train him along the special lines of his employment, and upon

THE CURRICULUM

which he may in his unemployed hours build up a technical equipment entitling him to advanced consideration in the labor market.

But it would be cruel indeed to send the hyper-sensitized child out from the school with an eye blind to the beauties of nature, with an ear deaf to the voice of the poet, with a mind dull to the joys of the philosopher, in short, with a soul dead to the things of the higher and broader life and incapable of cultural growth. Therefore a second kind of offering must be provided—the child must be given a taste and an appetite for those studies which are outside the realm of immediate practical utility.

Now these two offerings represent in turn just what the two contesting forces have been fighting for: the conservatives have striven to magnify the essentials; the radicals, to magnify the culture studies. But, unfortunately, the struggle has resulted in a compromise, when what is needed is an arbitrament; and it is the child who has suffered from the effects of the compromise. It is as though the educational court had awarded the custody of the child to the joint guardianship of the utilitarian and the culturist with the result that each of these good Samaritans has him by an arm and is tugging at him hourly with unremitting attention. A saner decree would be to grant to each of his guardians full control of the child for a specified number

PROBLEMS OF THE ELEMENTARY SCHOOL

of hours daily, and to hold each responsible for the child's progress along his special line.

Let us particularize. There are two great harms done the child as a result of the compromise between the two ideas of utility and culture, namely, the harm of teaching the utilities in the cultural spirit and the harm of teaching the culture studies in the utility spirit.

The difficulty that is introduced into the teaching of the utility subjects by the spirit of the new education is multifold. First of all there is the difficulty with the time schedule. In their zeal to enrich the curriculum through the introduction of new subjects, the programme makers have been obliged to abbreviate the time allowed the essentials, and yet the work to be done in these subjects has not been reduced materially if at all. This is axiomatic: a twenty-five-hour week given over to fifteen subjects cannot allow each subject so long a period as when the same week is apportioned to ten subjects.

In the second place, the more recently developed methods appropriately applicable to the teaching of the content studies have been carried over into the teaching of purely formal studies. The method of the recitation in geography, for instance, has extended to those subjects whose chief aim is the development of formal habits; and the spirit of *laissez faire* has

THE CURRICULUM

superseded that of drill. In fact, good old-fashioned drill is at a discount, and emphasis of its importance is too frequently rated as a punishable educational heresy.

A few pages back the utilitarian essentials of the curriculum were outlined. That presentment occupies but a few lines of print, and yet it constitutes in itself a course of study which well might employ a teacher and her forty or fifty pupils for three hours a day throughout six or more years of the elementary school course. For, and this is the rock on which the enriched curricula go to wreck, there is nothing in the new education which has succeeded in nullifying the law of habit-building, so accurately expressed by Dr. Bagley as "Focalization of consciousness upon the process to be automatized, *plus attentive repetition* of this process, permitting no exceptions until automatism results."¹ The italics are my own.

Charles Dickens, the lay teacher, had no obscure notions on this subject. Reread your "Oliver Twist" and along toward the end of the ninth chapter you will recall how Mr. Fagin drilled his pupils, through "a very curious and uncommon game" in the art of extracting "with the most extraordinary

¹ William C. Bagley: "Classroom Management," Macmillan, 1907, p. 16.

PROBLEMS OF THE ELEMENTARY SCHOOL

rapidity, snuffbox, note case, watchguard, shirt-pin, pocket handkerchief, even the spectacle case," from the pockets of "the merry old gentleman." Nowhere throughout the account do we hear of preparation, presentation, association, but we do learn that this game was repeated "a great many times." Even sixty pages farther along in the narrative we are told that the two boys, not what we would call a large class, "played the old game with the Jew every day." Drill, drill, and more drill, was the method, and carefully indeed did Fagin the pedagogue avoid the modern educator's curious vagary of supposing that if a lesson is "presented" once to a class it is sure to be at the recall of all the members of the class weeks afterwards.

Moreover, from the practical exigencies of school management, the effects of insufficient drill are sadly cumulative. A certain standard in a subject is fixed for a certain grade. At the end of the term an orthodox proportion of pupils must be promoted out of that into the succeeding grade. These pupils are duly forwarded. The requirements of the new grade are definitely scheduled on the supposition that the class which the teacher confronts is grounded in the preliminary work and prepared to take up the advanced work without review of the old. This assumption is quite contrary to the fact, as practical class teachers

THE CURRICULUM

well know. There is no time in the new grade to rivet the work presented in the grade below.

From grade to grade the difficulty accumulates, the pupil's incompetency increasing as the square of his distance from the starting point of his school career. We are speaking, be it remembered, of the ninety per cent. In their interest the work demanding drill should be reduced in quantity. For instance, in mathematics, cut out, not a topic here and there, but fully half of the work ordinarily presented, retaining at least all of the time now allotted to the subject, and *then teach that half*.

To give but a single illustration of the present situation, contemplate the eighth-year girl, the girl whose destiny it is to leave school within a year to busy herself in the home or in outside vocational employment, and picture her as she flounders around in a swirling Sargasso of cylinders, cones, trapezoids, pi-r-squares, x—y's, and yet is quite incompetent to audit her mother's grocery bill—I mean to add it up once and be sure it is correct. She has been taught the distinction between adjectives and adjective participles, that is, the distinction has been duly and pedagogically “presented” to her, but if she is not serious-minded, it dwells with her but fleetingly, and if she is, worse luck, it takes the part of an unbridled evil spirit in her troubled dreams. In the midst of

her struggles to do her "home work" in parsing, imagine her mother saying to her, offhandedly, some evening: "By the way, daughter, I forgot to order some white muslin when I was at Brown's Emporium to-day. Drop them a note and ask them to send two yards of the eight-cent quality to-morrow when they send what I ordered to-day. Be sure that they send it to-morrow without fail, as I must have some of it to mend Robert's shirt that he tore yesterday. They can charge it, of course." Do you, gentle reader, picture her saying cheerfully, "Yes, mother," and in a few minutes presenting a note for her mother's inspection, concise, correctly worded, legibly written, and properly addressed? If so, you are a remarkably venturesome optimist. I seem to hear her petulant appeals, such as: "What paper shall I use? Do you spell Emporium with a *u* or an *o*? Is this the 19th? Shall I write Tuesday in the date? Was it white you said? How do you spell muslin? What shall I tell them about Bob's shirt? Do they know you have an account there?" *ad libitum* until the overworked mother resolves not to bother daughter another time with so plebeian a task while she has verbals and parallelograms to groom for to-morrow's appearance at school.

Thus far, we have been contemplating the damage done to the utility subjects by the uncurbed influence

THE CURRICULUM

of the enriching subjects. Conversely the new and cultural subjects have suffered acutely at the hands of the drillmasters. For teachers of the old school, the time-hardened drillers, there is no method of attacking any subject except through formal teaching. Hence we see cultural studies subjected to drill methods. Even if such a teacher waxes enthusiastic over the new subjects, his zeal comes perilously near complying with Professor Santayana's definition of fanaticism which he says "consists in redoubling your effort when you have forgotten your aim."

We are told that the word school is from the Greek, "a transferred use of *σχολή*, spare time, leisure." Would it be such an alarming matter if we were to revive this idea, and frankly treated part of our school day as leisure, or spare time? The boy or girl who is one of the fortunate ten per cent, scheduled for higher education, may perhaps justifiably be put to a formal and persistent study of the cultural subjects in preparation for their more intensive consideration later on. But for the ninety per cent, may we not safely provide the environment and the seductive atmosphere of culture on an extensive but necessarily shallow scale, and then let these pupils browse about, under skillful guidance, not compelled to absorb it all, but free to pick and choose much of it for themselves?

PROBLEMS OF THE ELEMENTARY SCHOOL

No one person can reasonably be expected to evince an absorbing interest in all departments of culture. Here is a boy who delights in bees but eschews Browning; here is another who relishes Shakespeare but hates science. Must we beat and hammer each into a duplicate of the other, and turn him out a composite pseudo-scientist and dilettante *littérateur*? We know some first-class scientists who are wretchedly indifferent to Browning; and we know some men of letters who are hopelessly ignorant of the habits of bees; and yet we do not think of any of these as uncultured. Is it not more reasonable for us to encourage the bee-boy to become a thoroughgoing scientist and the Shakespeare-boy to become a thoroughgoing student of literature? As Superintendent Chancellor puts it, "The general fact is that at the present time the fashion in the schools is to carry out too narrow, too uniform a curriculum. It needs to be broadened and enriched. But it does not need to be increased in the case of any individual child."¹

The culturist must abandon his hope of so schooling our children that they may go forth at the age of fourteen with a "finished" education. He must modify his hope so that it may reasonably become an

¹ William E. Chancellor: "Our Schools, their Administration and Supervision," Heath, 1905, p. 282.

THE CURRICULUM

expectation, and work for the coming of the day when the child meets his practical adult world equipped in the essential utilities so that his material progress is assured, and yet imbued with the spirit of reading and research, of discontent with the limits of his information and his mental grasp, and of determination to persist in his self-education all the days of his life. Give him this double equipment, and you will be giving him that which surely the average public elementary school of to-day lamentably fails to give him.

These two main purposes, then, must we have in our public education: to teach the child to work while he works, and to teach him to browse while he browses; to teach him to work honestly, earnestly, unremittingly, and effectively, to browse intelligently, profitably, and joyously. We cannot effect these two purposes by permitting them to contest throughout the school day for the possession of the child—there must be arbitrament, not contest.

To restate it in more specific terms, this is the programme: give the essentials two or three hours of the school day; give the culture subjects the balance. Give the essentials those portions of the morning and afternoon sessions during which the pupil has a maximum of available energy. Cut down the details of the essentials, prune them to a very simple but a very definite programme, then teach thoroughly, relentless-

PROBLEMS OF THE ELEMENTARY SCHOOL

ly, demanding of the child unremitting and increasing concentration of attention. Let this complete his school day so far as hard work is concerned, leaving nothing to be done at home. For the balance of the day introduce him to the content studies and the arts, but extend this to him in the spirit of privilege, not as a duty or task. Give him a reasonable liberty, growing in amount as he grows, to cull for himself that which his individuality demands. Most important of all, do not hamper or depress him with home work, tests, or examinations, in these subjects.

We may well agree with Dr. Hanus when he says that "The education demanded by a democratic society to-day is an education that prepares a youth to overcome the inevitable difficulties that stand in the way of his material and spiritual advancement."¹ But we need to make very sure that our schools are giving a true preparation, and above all, that they are not themselves augmenting the "inevitable difficulties."

¹ Paul H. Hanus: "A Modern School," Macmillan, 1905, p. 3.

III

MORAL TRAINING

HE would be presumptuous indeed who would undertake to discuss with any air of finality the subject of moral education. The large and excellent bibliography on the subject serves to emphasize both the seriousness and the intricacy of the problem and the earnestness and sincerity of the attempts at its solution. "Moral Training in the Public Schools" is of such gravity as to have elicited a volume,¹ bearing this title, in which are gathered five from out of a total of three hundred essays which were submitted in competition for cash prizes offered by a citizen of California. Upon reading these selected essays one is impressed not alone by their uniform excellence and scholarly spirit, but perhaps even more by the immensity and complexity of the subject, as evidenced by the variety of viewpoint, of method of treatment, and of suggested solution, advanced by the different authors. And so, I repeat, one who presumed to dispose of this subject in a chapter would be giving

¹ C. E. Rugh, *et al.*, Ginn, 1907.

PROBLEMS OF THE ELEMENTARY SCHOOL

prima facie evidence of his total inability to discuss the subject at all. In these pages, therefore, the subject can be touched only tangentially, and the tangent will be drawn from the point of view of the preceding chapters.

By way of introduction, we may remind ourselves that moral development is a threefold phenomenon.¹ Conduct, our "three fourths of life," is the index by which we gauge moral ability in others. Each of us has a supplementary gauge which he can apply to himself, but to himself only, namely, the quality of such of his own thought as issues not in specific action. But in evaluating the moral strength of our fellows we have only their tangible acts upon which to base our judgment.

Conduct, as we have said, has a trinitarian basis: it is dependent upon the exercise of intellect, feeling, and will. The child may be both quite eager and quite willing to do the right in a specific case, and yet be honestly in doubt as to which constitutes the right act; that is, his deficiency is not one of feeling or of will, but of knowledge. Again, he may know perfectly which of two actions is the right, may have a will thoroughly capable of leading him to one or the other of these actions as he may decide, and yet fail

¹ Cf. "The Management of a City School," p. 247, *et seq.*

MORAL TRAINING

through an utter indifference as to whether his acts are right or wrong; that is, his intellect and his will are not at fault, but a moving feeling for the right is absent. Or again, he may clearly see the right, may ardently desire to do the right, and yet find himself too weak-willed to do that which his intellect and his feeling prompt him to do.

And all this is true, of course, not only of man in his childhood but throughout the entire span of his life. The only difference is that the school and the home are prone to assume a degree of moral perfection in its children which it rarely demands of the adult. Witness the mother who daily exclaims: "I don't see why George acts so," George being the five-year-old whose deficiencies in arithmetic and reading are taken for granted, whose æsthetic shortcomings elicit no comment, and yet whose moral ability is regarded as something that ought to grow up of itself. All of which suggests that if the school is to concern itself at all with moral training it must consider it just as seriously as it does the training of the pupil in intellectual acumen, manual skill, or art appreciation.

There is just one unanswerable reason why the school must consider the moral training of its pupils, and that is because it cannot possibly leave it unconsidered. The child is bound to get a moral training of some kind wherever he goes; he is particularly sure to get a moral

PROBLEMS OF THE ELEMENTARY SCHOOL

training of some kind when he goes to school. So that the question is not, "*Shall* the school give moral training?" but, "The school *is* giving moral training; what kind shall it be?" The school may rightfully be held accountable in the matter. If the school environment gives a moral training in grade below that of the child's environment outside the school, then must the school be condemned as an institution dangerous to the welfare of society. But the school cannot hope to escape this condemnation by merely letting well enough alone; it must give positive attention to the moral growth of its pupils.

For there is nothing intrinsically moral in the school. I mean by this that the mere fact that a child enters a school building and there meets scores of other children and with them is compelled, one way or another, to acquire certain information, is no guarantee that he is thereby to grow in moral ability. That ability is bound to be affected in some way, but not necessarily in the direction of growth and improvement. It may be so affected as to make him morally weaker than if he had remained on the street; or again, it may be so affected as to make him tremendously stronger morally than if he had remained on the street. The child cannot go to school, nor anywhere else, and remain unaffected morally; his environment trains him positively either toward morality or toward immorality.

MORAL TRAINING

Were it possible for the school to deal with the child intellectually only and have no effect whatever upon his moral nature, whether for better or for worse, then the teaching of morals might be considered an extraneous thing, and the advocates of its intrusion would be on the defensive. But the case is not so. Select any incident at random in the pupil's school day. Here, for instance, is a boy who has just solved a problem in arithmetic. He carries his paper to his teacher, who looks over his work and disposes of it. In all of this simple procedure there is a definite moral tone which has its inevitable, though not always startling or recognized, effect upon the boy. The spirit in which he attacked the problem, the manner in which he walked to the teacher's desk, what the teacher said and how he said it, the boy's reaction toward the teacher's attitude—all these have their moral value, all have their sure effect, be it ever so little in quantity, upon the boy's moral progress or retrogress. Thus every exercise and event in the school touches the moral spirit of the pupil—the school cannot escape its responsibility.

We are not to suppose that the child himself is analytic concerning his own gain or loss in moral culture. He, like the adult, ordinarily "senses" things, not syllogizes them. For example, he does not often say: "I did so and so; the teacher treated it thus; that was un-

PROBLEMS OF THE ELEMENTARY SCHOOL

just; therefore, I am unjustly treated; therefore, I will . . . etc." Rather has he an indefinite rankling sensation that he is not being fairly treated; but his consequent conduct is no less positive because it is based on a general feeling and not on a specific intellectual inference. This preambles the thought that the very organization of the school cannot fail to exercise an indirect though nevertheless powerful effect upon the moral training of its pupils. It is this influence of the organic structure of the school system upon the problem of moral culture that constitutes the theme of this chapter.

America unfurls the flag of democracy on which are emblazoned "liberty, fraternity, and justice," and we all cheer lustily. But as she takes up the educational banners upon which are inscribed the golden word "opportunity," and proceeds to distribute them to a meager tenth of her children, and then, in stepmotherly fashion, gives to the others the simple privilege of shouting while her favorites march by, can she reasonably demand from these an enthusiastic devotion either to democracy or to the abstractions of justice and right? Even though he says little about it at the time, does not the fourteen-year-old boy, suddenly cast upon the maelstrom of life, untrained to pull an oar or reef a sail, still sense the fact that America had apprenticed him to a horticulturist and not to a navigator?

MORAL TRAINING

Retardation is the euphemistic technical term, recently discovered, applied to the patent fact that our children do not get along well at school. There is, though, a certain felicity in the selection of the word, for it implies that the mishap of the pupil is something for which he is not responsible—retardation must mean that the child is retarded by something or somebody. In spite of much current talk on the subject, it is a question as to whether we quite know what it is all about. Shall we measure a child against an average standard, against an abnormally high standard, or against an exceptionally low standard? Why not simply measure himself against himself? And how can we measure him against himself if we give him another person's work to do instead of his own?

Having set up a school machine that is not constructed to do the work required of it, shall we stand off and wonder why the products of the machine are mutilated and defective? Instead of rebuilding the machine, we continue to patch it here and there, hopeful that by some chance stroke we may improve the product. Then when the tinkering is unsuccessful, recourse is had to shifting the blame to the engineers. There is surely no teacher who would pretend to have fully mastered the teaching art, nor any principal who would claim to manage his school faultlessly; it is to be hoped that each employee in the school system is

PROBLEMS OF THE ELEMENTARY SCHOOL

ready to acknowledge his own shortcomings in his position; and yet he would seem justified in protesting against being charged with defective results which are presumptively due to false organization. Retardation is not an indictment against the teacher and his teaching method so much as it is against the organic structure of the school.

It may seem that this reference to retardation would more properly have been made while we were considering the curriculum, but it belongs right here. Moral nurture requires all the favoring conditions which it can command. Moral integrity is so tender a plant that we should not take any chances in trying to raise it in poor soil. Pupils, set to doing the wrong tasks, are making the struggle to grow morally, in arid soil. Undoubtedly the plant is not conscious of its meager growth nor does it philosophize about the quality of the soil from which it springs—but the gardener is nevertheless responsible. The child has no very clear notion of why he stumbles in his moral progress, or even perhaps of the fact that he is stumbling. But whether the retarded child realizes it or not, his very retardation is a force making against his moral growth—and the school is responsible. Reorganize the school; measure the child against a standard appropriate to himself; eliminate the strain on his moral development which results when, owing

MORAL TRAINING

him one kind of schooling, we thrust another upon him.

We may look at this subject of moral training with advantage if we reconsider it in its relation to the curriculum, and once more recall the contest between the formalist and the culturist for the possession of the child. To give the child naught but the disciplinary, the formal, the utilitarian, subjects of study, and to compel him to toil throughout his school day and school year in their atmosphere, is to exclude all the incentives to moral growth which inhere in the culture group of studies.

It is true that there is a certain knowledge of the right to be acquired through the study of the truths of mathematics; there is a certain feeling for the right to be experienced through the ideals of mathematical accuracy and precision; there is a certain development of the will power resulting from the struggle with the formal processes and the rigorous reasoning involved in mathematical calculations. And yet to depend wholly upon arithmetic and the other formal studies for the culture of the knowledge, the feeling, and the will, which function in every moral act, is unnecessarily to limit opportunity and to employ a method needlessly harsh and forbidding. There is very much in the realm of literature, of science, of history, of art, of handicraft, that teaches effectively the knowledge

PROBLEMS OF THE ELEMENTARY SCHOOL

of and feeling for moral issues, and we are demanding the impossible of the child when we exclude him from this realm of profit and yet hold him to a high-quality virtue.

On the other hand, to give the average child a curriculum overloaded with content studies—studies which he should pursue not as a preparation for further formal study in higher institutions but solely for interest and inspiration—is to set his mind in such a whirl that the moral virtues are in danger of being submerged and lost. In their laudable eagerness to relieve the child from the severities of the utilitarian programme, the culturists have weakened him in all three departments which make for moral strength.

In the first place, knowledge of right and wrong comes either through the acceptance of dogmatic teaching or through careful thinking on a few well-considered facts, never from slipshod thinking about a vast multitude of facts. Was it Josh Billings who told us that “it is better not to know so many things than to know so many things what ain’t so”? Whoever the author, it is the expression of a saner pedagogy than many of the professional pedagogues preach or practice. The digestive capacity of the average child is as limited for mental food as for bodily food; when his mind is stored with innumerable scraps of knowledge and then these are tamped down day after

MORAL TRAINING

day so as to stuff in still more, he is sure to be harboring, many, many things "what ain't so." And the pity of it is that either he charges the school with bad faith when his condition is finally revealed to him, or else he never learns his plight and goes through life thinking hazily and lazily. If a boy cannot think accurately in terms of arithmetic, or of geography, or of civics, how are we to suppose him capable of thinking accurately in terms of moral precepts and moral definitions?

In the second place, the pressure of the culture studies on the time schedule reduces the total time given to the formal group; and the inclusion of an immense number of totally unnecessary topics in the various formal studies, materially reduces the time available for each topic. The result is that the teacher, under average conditions, cannot teach thoroughly, with the further result that the ideal of thoroughness is shattered. Pupils present indifferent work; the teacher knows that it should not be accepted, that a higher standard should be set before the pupil and compliance therewith imperatively demanded. But to maintain this standard is a physical and mental impossibility, and so the child accepts as his standard the carelessness which circumstance compels the teacher to accept from him. Now carelessness is distinctively an immoral ideal. How can we expect a

PROBLEMS OF THE ELEMENTARY SCHOOL

child whose ideal has been thus untrained or wrongly trained in regard to intellectual tasks, to carry over to the moral realm careful ideals of duty and truth?

In the third place, the spirit of the cultural studies has exerted a decided influence upon the teaching of the formal group. The keynote of the new education is interest, and even the teaching of the multiplication table may be made, in a way, interesting, intrinsically so in its presentation and artificially so in its drill. But there is an acquisition of formal knowledge and power which can come only through intense concentration of attention. To make a subject interesting through the petty devices of teaching method, is to make it fruitless in will training. And so the influence of the interest-rousing spirit upon those essentials of the curriculum which are to be acquired only by brute force, as it were, has not been altogether a profitable one. Moral development, while dependent upon knowledge and feeling, is predominantly a matter of will. The education of the will, by very definition, means fundamentally training in doing what we do not especially desire to do. It follows then that will training cannot be made "interesting." This is true when we mean by interest any direct stimulus which compels attention; it is of course not true if we extend it to include that higher interest which functions indirectly through ideals.

MORAL TRAINING

Consider a single crude illustration. A boy is left alone in a room with a luscious red apple in sight which belongs to another boy. He knows that to appropriate that apple to his own use would be a wrong act—an act which he has learned to call stealing. His general sentiment, his ideal, is honesty; his higher self prompts him to overrule his appetite and not take the apple. If he succeeds in so controlling his will that it is obedient to his ideal and not to his appetite, he has won a moral victory and has made a distinct advance in the subjection and training of his will. If we call this ideal an interest, as probably we should, then we must admit that interest does factor favorably. But suppose, as the boy is about to steal the apple, he suddenly recollects that he has an orange of his own in his lunch-box, and also that he really likes oranges better than apples. This direct interest, this demand upon his involuntary attention, though it does result in his not stealing, has done little or nothing in training him in the virtue of honesty. Or again, suppose that while he is debating the question with himself and is about to take the apple, his teacher suddenly appears upon the scene and imposes her will upon his. Although the act of stealing has been averted, it is clear that there has been no advance in the training of the boy's will. In other words, the essence of moral power is the ability to do, of one's

PROBLEMS OF THE ELEMENTARY SCHOOL

own volition, those things which we desire not to do; it is the victory of the imperative *ought* over the seductive *please*.

When the teacher attempts to give the pupil the elements of the formal studies through an interest which aims to inveigle him or trick him into their acquisition, he is depriving the child of the very training in will development which is his due. Of course the drillmaster is not to construe this into a license to do naught but drill his class in intellectual performances; there is no moral virtue in drill, *per se*. It is only when the pupil submits himself to unattractive drill through the operation of some ideal which he recognizes *for himself*, that he is gaining in will power.

I recall the case of a girl sent to me by her teacher with a "commendation card" for an excellent geography recitation. As I indorsed the card with my signature, I said, "So you like geography, do you?" Her frank reply came with explosive promptness, "No, I hate it." It was evident that she had made an important gain in the power of self-application to a distasteful task, and it was no less evident that the teacher was alive to her responsibilities for the training of her girls toward moral conquest.

Now, the essence of an ideal is that it shall in some way represent an ultimate and transcendent "good." It must have a recognizable "value." The pupil must,

MORAL TRAINING

in one way or another, be brought to sense his duty, which is but his epitome of ideals. He learns that it is his duty to do his school work—including all the disagreeable phases of it—because, broadly speaking, it is right for him to become educated and wrong for him to grow up in ignorance. But if we recognize the fact that the so-called education which we put upon him is not the education which will make him most effective, either individually or socially, how can we, with any conscience, lead him to a faith in this misdirected education as an ideal? A curriculum which gives pupils so much to do that they can do none of it thoroughly, which leads them to believe that their full duty consists in passive submission to the active determination of the teacher to interest—we had almost said amuse—them, which seems to teach them that it is easily possible to get something for nothing, is a curriculum immoral certainly in its effects, if not in and of its very self.

The central thought of the kindergarten, as I understand it, is to provide the child, early in his life, with practical ideals which shall become effective motives in directing his activities and shall gradually transform his aimless play into purposeful work. It must be admitted, however, that this spirit has been misinterpreted by many of the enthusiastic disciples of Froebel. They seem to have read the

PROBLEMS OF THE ELEMENTARY SCHOOL

word *play* in enlarged capitals and to have entirely overlooked the great moral implications of the kindergarten idea. Hence the plea that the spirit of the kindergarten be extended through the elementary-school grades has all too frequently resulted in attempts on the part of misguided teachers to convert into play those activities of the school which must ever involve work, hard work, work in the performance of which inheres the essence of moral stamina and true virtue.

Professor Wendell, in his essay on "Our National Superstition," scores the weakening effect of these misdirected ideas in the so-styled "new education." "The whole new system of education, from a child's first school to a man's last degree, is based on this principle, which we may call the principle of the kindergarten—not literally, of course, but as a matter of general temper. You must try to find out just what everybody likes best, and then help him to do it just as kindly as you can."¹ He traces the effect of this principle in these words: "boys fitted for college at schools where the new education has supplanted the old, seem to me, almost year by year, when they get to college, flabbier and flabbier in mind," and he illustrates with the story of the Harvard sophomore whom he advised to "take in hand some hard and

¹ Barrett Wendell: "The Privileged Classes," Scribners, 1908, p. 157.

MORAL TRAINING

solid subject, and therewith to plow out the traces of the kindergarten."

Probably Professor Wendell would not wish his essay construed as an attack upon the kindergarten *per se*, nor do we need to make any such attack in order to convince ourselves that the power of relentless concentration is not one of the virtues developed by the latter-day pedagogy. And if the effect upon the chosen one per cent of children who go to college is so marked, can we wonder that the ninety per cent in our elementary schools succumb to the enervating spirit of *dolce far niente*? We may well question our right to demand of our pupils that they shall exhibit in the moral sphere a will power which we neglect to develop in their intellectual training.

How can we expect the child who has never learned to face forbidding and distasteful intellectual tasks and conquer them through sheer force, to meet the moral crises of his life with infallible strength of will?

There are many other causes, some of them painfully patent, of the present unsatisfactory relation of our public schools to moral education, but I purposely refrain even from referring to them. I wish rather to support the single thesis that the curriculum itself exercises an influence upon the moral development of the pupils to whom it is applied, an influence which may neither be lightly disregarded nor readily

PROBLEMS OF THE ELEMENTARY SCHOOL

measured. The substance and spirit of the curriculum should therefore be such as to promote and not to impede this development. Our American curriculum, so closely related to our illogical school organization, is on trial charged with increasing the difficulties attending the problem of moral training when it should be one of the most powerful and positive contributions toward its solution.

PART TWO

PROBLEMS IN METHOD AND MANAGEMENT

INTRODUCTION

THE distinction has elsewhere been drawn¹ between the general and the specific relations which the school principal and the class teacher sustain toward the state. The problems discussed in the preceding chapters are such as ordinarily concern the subordinate in a school system only as he is interested in fulfilling his general obligation to society. His specific contract does not call upon him to settle general policies or to solve the broad problems of school administration. Nevertheless, as an honest student and a thoughtful observer he is bound to have some opinions regarding these policies and these problems; and it is in recognition of the general duty which the state imposes upon him as one of its professional members that he offers the results of his study and his observation, hopeful that they may be received at their face value and render to society a service proportioned to their merit. But as attention is transferred from these broader problems to the details of school and

¹ "The Management of a City School," p. 9.

PROBLEMS OF THE ELEMENTARY SCHOOL

class management, the specific obligations of principals and teachers come into view.

So long as the whole subject of educational theory and practice is in a state of unstable equilibrium, each school must be considered an experiment station, and each executive head—whether of a class, a school, or a system—must regard himself as a research student in the pedagogical laboratory. The principal particularly has a unique opportunity to work out tentative solutions to definite problems in both management and methods. He occupies a position midway between the enthusiastic exponent of educational reforms and the practical teacher upon whom falls the burden of attempting to realize those reforms. His consequent function is that of intermediary between theory and application, and his philosophy will be a practical idealism. Keeping his head in the radiant but shifting clouds, he yet grounds his feet squarely upon the prosaic and solid earth. He recognizes the value of ideals and appreciates the sincerity of those educational writers whose expression is largely in terms of the ideal; but he also sympathizes with the class teacher whose devotion to the philosophic phase of her work is imperatively diverted by the demands of a very present and actual condition of fact. Through receptive sympathy the most ardent thought of the progressive educationalist

INTRODUCTION

may be properly tempered by the cool judgment of a practical principal and safely passed on to the teacher for her to apply to the factual situation.

Those who are directly engaged in school and class management are in search not so much of the statements of new theories, though the motivating value of these is duly acknowledged, as of reports of the applications of such theories in actual current practice. From which it follows that, in proportion as the school executive has opportunity to experiment, it is his duty to report upon the results of his experiments to his fellow workmen. It is with a sense of this duty, which overrides my own recognition of the shortcomings of the following pages, that I send them forth.

My lines have fallen in pleasant places, and the large elementary school which I have had the good fortune to administer for several years has afforded an excellent opportunity for the study of definite problems as well as encouragement to attempt their solution. But however willing the spirit may be to devote itself to work of this character, the time left for such work after the hours demanded by the daily routine have been subtracted from the school day, is all too brief. Of the specific subjects treated herein, those of chapters four to seven may more properly be considered as problems of methods and those of

PROBLEMS OF THE ELEMENTARY SCHOOL

the succeeding chapters as problems of management. I have aimed to include nothing that has been definitely worked out in the same way by other school men and already described in published form. If it should prove that I have been anticipated in any respect by matter already published which has escaped my notice, I here record my assurance that it is in spite of a conscientious effort to acquaint myself with the bibliography of the various subjects.

It seems unnecessary to apologize to practical teachers for entering quite fully into working details. It is the interchange of views in just such detail that is most desired by craftsmen already grounded in the philosophy of education and the essentials of method. At this point, too, I may, once for all, express my apology—if apology be needed—for the prevalence of the first person in the language of many of the following pages. Most of the sentences could be recast so as to give them the air of impersonality, but the results of experience seem to be most effectively presented in the direct speech of the deponent, and any formal attempt to avoid the possible criticism of egoism would seem an unnecessary affectation.

IV

ENGLISH IN THE UPPER GRADES

COMPOSITION¹

"COMPOSITION," as it is understood in its limited school sense, is the art of composing thoughts, that is, of putting thoughts together properly. The expression of a detached, random thought or collection of thoughts may no more be dignified by the term *composition* than the careless daub of the brush is deemed a composition in the pictorial arts. Hence the essence of composition teaching is to train the pupil *to arrange* his thoughts. He needs to learn this art for both its personal and social value. It is the latter phase which perhaps comes most prominently to mind when we consider composition work in the schools, namely, the necessity for proper thought *conveyance* so that the individual may be

¹ Particularly sixth-, seventh-, and eighth- year grades. For primary composition, see, among others: Percival Chubb, "The Teaching of English," The Macmillan Co., 1907, pp. 106-117, and Joseph S. Taylor, "Composition in the Elementary School," A. S. Barnes and Co., 1906.

PROBLEMS OF THE ELEMENTARY SCHOOL

an effective and agreeable member of his social group.

Equally important, however, is the development of the habit of clear and orderly thinking, even when there follows no immediate formal expression of the results of this thinking. This is necessary to any substantial progress in the personal cultural life of the individual. By way of illustration we have only to note how *unthinking* is the reading of even intelligent people. For many, the novel is the only literary form with which they are at all intimate. The value of the novel is certainly not to be minimized—its power to stimulate, to soothe, to interest, even to instruct—but as a means of intellectual discipline how far inferior it is to such a form of literary composition as the essay.

Few people read in order to think. Quite frequently their reading results in a substantial inhibition of their own impulse to thinking, with danger of an eventual atrophy of the power to think in any true sense of the word. Compared to the number whose only conception of reading is the absorption of the plot and incident of the novel, few indeed are they who are willing to read one page, say of Emerson's Essays, and think five pages, and extremely few are those who have deliberately cultivated such a habit. The development of the habit of self-reliant thinking,

ENGLISH IN THE UPPER GRADES

then, is an aim of school training justified by consideration not only of the child's responsibility as a social unit, but also of his personal culture.

Thought arrangement is impossible, moreover, without the presence of a store of thoughts. Of course no person can be absolutely thoughtless, and yet there exists an undeniable necessity, in any method of training, for deliberately providing a supply of thoughts.

Composition teaching consequently involves definite cultivation of (1) the pupil's power and habit of searching for and seizing upon the raw materials of the thinking process, (2) the ability to work over these raw materials so that they may be properly classified and correlated in his mental storehouse, and (3) the ability intelligently to convey the results of his thinking to others by means of verbal expression. For convenient reference, we may designate these three stages: (1) Acquisition, (2) Organization, (3) Expression.

(1) *Acquisition* is directed toward materials which will work up into various forms of literary composition and is concurrent with all the instructional exercises of the school. Every subject of the curriculum forces upon the pupils' attention materials which are stowed away in consciousness, where they remain subject to a more or less ready recall. The skillful

PROBLEMS OF THE ELEMENTARY SCHOOL

teacher recognizes that in teaching each subject he is not only working toward the specific ends by virtue of which that subject has a place in the curriculum, but he is also accumulating for the pupil subject-matter which the pupil is to reorganize for the distinctive purpose of exercising his powers of expression. That is, he is teaching each subject not only directly for itself, but also indirectly for results in composition. Hence he will bear in mind the various uses to which the acquired facts may be put in the work in composition, and the pupils themselves in their progress through the grades will gradually learn to classify the chief kinds of production.

The forms which verbal composition may take are those which constitute the time-honored categories of rhetoric, namely, narrative, description, exposition, and argument. Professor Gardiner¹ groups these into the literature of thought (the last two) and the literature of feeling, and includes, too, in the former group a type which is scarcely to be considered in the elementary school, criticism.

All acquisition may lead toward any one of the four kinds of composition; and the pupil, unless he is deliberately acquiring facts for a particular kind of composition, will absorb ideas regardless of the exact form

¹ J. H. Gardiner: "The Forms of Prose Literature," Scribners, 1900.

ENGLISH IN THE UPPER GRADES

of their eventual use. However, certain school studies and exercises seem to be better adapted to the development of one rhetorical form than another and hence to be most prolific in supplying this particular need. This field of the subject has been well worked over¹ and is not further referred to here.

(2) *Organization* makes such a selective arrangement of the raw materials already acquired as will dispose them economically in the mental storeroom and prepare them for appropriate expression.² "An agglomeration of material has no literary value, any more than a stone-heap has an architectural value. If the author has done nothing but amass he is uninteresting."³ Under the head of "organization" should come the study of the model, considered as a compo-

¹ Chubb, *op. cit.*, p. 178, *et seq.* Gardiner, *op. cit.*, pp. 25-181. Scott-Denney: "Elementary English Composition," Allyn and Bacon, 1906, p. 88, *et seq.* Scott-Southworth: "Lessons in English," Book II, Sanborn and Co., 1906, p. 287, *et seq.* Emerson-Bender: "Modern English," Book II, Macmillan, 1906, p. 341, *et seq.* On argumentation, see Frances M. Perry: "An Introductory Course in Argumentation," American Book Co., 1906. William Trufant Foster: "Argumentation and Debating," Houghton, Mifflin, 1908.

² "To compose is to organize; you cannot get a well-organized product from a disorganized mind. This we would keep as the root idea of composition in the Grammar Grades."

—Chubb, *op. cit.*, p. 174.

³ Charles F. Johnson: "Elements of Literary Criticism," Harpers, 1898, p. 16.

PROBLEMS OF THE ELEMENTARY SCHOOL

sition whole, and models for this purpose should exemplify not alone beauty of language but excellence of logical arrangement.¹ In addition to the analytic study of the model, formal synthetic exercises in organization should be given, wherein the pupils have set before them a series of detached sentences, or lesser elements, which they are to rearrange into proper sequence.² The teacher may most readily get material for such exercises by disarranging the sentences in a model. It will add interest to the work if the pupils know the source of the material and are permitted to compare the results of their efforts at reorganization with the original.

The discussion incident to the study of the model and the reorganization of material will afford opportunity for the inductive development of the fundamental rules for rhetorical unity. The rules thus derived may in turn be taken as the basis for application

¹ " . . . there must be *impression* from good models, what the child hears and reads. The depth of the impression depends largely upon the intensity of the interest that accompanies the experience, and the frequency of repetition under the influence of alert, active interest."

—Robbins-Rowe: "Essential Studies in English," Book I, Row, Peterson and Co., 1907, p. 5.

² "One way of showing what a paragraph is, is to show what it is not."

—Adams Sherman Hill: "The Foundations of Rhetoric," Harpers, 1899, p. 313, *et seq.*

ENGLISH IN THE UPPER GRADES

in organization exercises. Chief among these rules are: "put but one main assertion and appropriate modifiers in a sentence, treat one subordinate topic in a paragraph, refer, when possible, in the closing sentence of a paragraph to the subject introduced in the opening, arrange paragraphs according to a well-considered plan, review the main positions in the close, give digressions an evident relation to the main proposition. . . ." ¹

One other form of exercise is indispensable in developing the organizing faculty: the making of outlines for compositions on given subjects, unaccompanied by either the acquisition process for the particular subjects considered or their expression in amplified form.² The paragraph heading will be the first unit of subdivision, followed by subtopical notes.³ Care must

¹ Johnson, *op. cit.*, p. 23.

² "Making outlines" is discussed (p. 132) in Carpenter, Baker, and Scott, "The Teaching of English in the Elementary and the Secondary School," Longmans, 1903. This also contains an extensive bibliography in English work.

³ "A paragraph is to a sentence what a sentence is to a word . . . the principles which apply to the composition of paragraphs are the same that apply to the composition of sentences." —p. 119.

"Words and sentences are subjects of revision; paragraphs and whole compositions are subjects of prevision."

—Barrett Wendell: "English Composition," Scribners, 1897, p. 117.

PROBLEMS OF THE ELEMENTARY SCHOOL

be exercised in the selection of subjects,¹ and they should be more truly *subjects* than the more limited titles which are often prescribed for finished compositions.² For instance, the subject of a class exercise may be "Vacation Experiences" and the titles of the several compositions quite dissimilar, as: "A Snake and a Stick," "An August Afternoon," "When the Golden-Rod Blossoms," etc.

(3) *Expression* is the final stage. This of course does not mean that, in the development of the pupil, all expression is postponed until he has mastered the arts of acquisition and organization, but that in the construction of any single composition, expression is the goal, with the other two exercises merely preliminaries in reaching it. In this stage the whole question

¹ A list of 325 subjects for themes is given in Brainerd Kellogg: "A Text-Book on Rhetoric," Maynard, Merrill, 1906. One thousand graded composition subjects are provided in Albert W. Emerson: "Composition and Criticism," Bardeen, 1893, p. 46, *et seq.* Many subjects are suggested and discussed in Gilbert-Harris: "Guide Books to English," Book II, Silver, Burdett, 1908, and in A. Howry Espenshade: "The Essentials of Composition and Rhetoric," D. C. Heath and Co., 1907, pp. 175, 368.

² "Give ideas, not subjects. The former inspire, the latter deaden. Do not trouble about the subject; a paper can be named after it is written."

—Rosa V. Winterburn: "Methods in Teaching," Macmillan, 1907, p. 81.

ENGLISH IN THE UPPER GRADES

of style¹ comes to the front, and the detailed arrangement of words becomes the subject of careful and critical study.

All composition is verbal, but its expression may be either oral or written. From the pedagogic viewpoint I would make a further distinction by classifying all school composition exercises in expression as *formal* or *informal*. The formal exercise plans to produce a complete composition of some one of the four rhetorical forms. The informal exercise seeks to strengthen expression in points of detail and has only incidental by-products, consisting of some unit less than a composition whole.

Under the informal phase there should be no rigid distinction between oral and written exercises. Teacher and pupils should not hesitate to go from one to the other in the most informal manner. During an oral composition, for instance, the teacher may say: "John, you expressed that extremely well; see if you can write it as well as you talked." John dashes it off quite informally while the rest of the

¹ Extended discussion of the elements of style—clearness, force, ease, elegance, etc.—will be found in any standard text in rhetoric. Among these are: Barrett Wendell, *op. cit.*, Adams Sherman Hill, *op. cit.*, and G. R. Carpenter: "Elements of Rhetoric and English Composition," Macmillan, 1906, pp. 220-242. On correct use of words, see Rossiter Johnson: "The Alphabet of Rhetoric," Appleton, 1903.

class proceed with their oral work. Conversely, during an informal written exercise. Under this head may be grouped a great variety of exercises, some of which are here enumerated.

(1) Drills on correct grammatical forms, as, for instance, the correct use of prepositions, of personal and relative pronouns, of irregular verbs, the proper location of explanatory modifiers, correct syntax, substitution of language for the pupils' "slanguage."

(2) Preparation for the formal composition involving search for and discussion of subject matter, arrangement of topical outlines, reports of individuals or committees assigned to research work.

(3) Discussion and criticism of pupils' formal compositions. Samples of the best and worst—the latter, of course, *incognito*—may be read or written on the blackboard.

(4) Reports on home reading, current events, personal adventures, topics studied in geography, history, and the other subjects of the curriculum.

(5) A series of pupils each talking to a single topical title of an outlined composition whole.

(6) Very brief—five-minute or so—written compositions, with no emphasis upon mechanical features, dealing with whole subjects or single paragraphs or topics, or reproducing stanzas of poetry or paragraphs of prose from memory or more immediate dictation.

ENGLISH IN THE UPPER GRADES

(7) Exercises in condensation, such as advertisements, "lost and found" items, the reporting of events and incidents in telegrams of a limited number of words.

(8) Exercises in expansion, such as invention of details of the story of "Jack and Jill," "Old Mother Hubbard," "The boy was Benjie; the bear was bulgy; the bulge was Benjie," etc.

(9) Speed exercises, in which pupils endeavor to report in writing as much as possible of a vivid narrative within a certain time limit. This is allied to the work of the newspaper reporter who strives, in the parlance of his trade, to "get a scoop."

Formal expression may be classified, somewhat arbitrarily, thus:

ORAL	{	Declamation
	{	Debate
WRITTEN	{	Letter
	{	Theme

The declamation is the oral essay presented without thought of immediate rejoinder,¹ whereas the debate deliberately sets one declamation against another. The letter is the written essay directed to a particular audience with corresponding modification in form

¹ See Edwin DuBois Shurter: "The Rhetoric of Oratory," Macmillan, 1909.

PROBLEMS OF THE ELEMENTARY SCHOOL

and substance, whereas the theme is addressed to a general and impersonal audience. Both kinds of formal expression require systematic cultivation, but the pedagogy of each differs. One large aim is common to both: the development of facility in thought expression, or more specifically, the cultivation of proper habits as to logical arrangement, rhetorical style, and grammatical correctness.

Another important aim, that of the development of facility in mechanical arrangement and accuracy, is present only in the written expression. Hence, in general, it may be laid down that in the criticism of written compositions only those matters of detail should be given attention which are unreachable in the oral composition. Detailed correction, in a written exercise, of errors in rhetoric and grammar, or even their indication, is inadvisable for many reasons, but chiefly because it tends to repression rather than to expression.¹ The pupil to whom is returned his two-page effort in composition, completely reticulated with colored cabalistic advertisement of his incompetency, is distinctly discouraged, and his next attempt will be cautiously abbreviated

¹ "Fluency must be sought for before correctness; or, in other words, the teacher must have freedom and spontaneity in view."
—B. A. Hinsdale, "Teaching the Language Arts," Appleton, 1896, p. 113.

ENGLISH IN THE UPPER GRADES

to a single page. The pupil is in need of every possible encouragement to express himself freely and fearlessly. If deprived of ample opportunity to practice expression without fear of consequences, he will never develop any skill in composition. His errors in rhetoric and grammar should therefore be pointed out to him orally when they occur in his written exercises, or referred to in written criticism in general terms only. The habit of making these errors must be deliberately and systematically overcome through the class exercises of informal character and his own formal oral compositions.

The ability *to write* is certainly not more than half of what is sought in composition study, so that we are safe in limiting written exercises at most to half of the time allowed for the entire subject of composition. Again, not more than half of the time allotted to written composition should be devoted to formal exercises.¹ That is to say, one-fourth of the entire composition time should be the maximum limit set

¹ "In ordinary life oral language predominates over the written. So it should be in the language period. The oral expression should precede and prepare the way for written work . . . writing involves all the difficulties of oral expression, with the added burden of spelling, punctuation, and manipulation of pen, ink, and paper."

—Sarah L. Arnold: "Waymarks for Teachers," Silver, Burdett, 1906, p. 123.

PROBLEMS OF THE ELEMENTARY SCHOOL

for the writing of formal compositions. This results, under the usual programme, in one formal written composition about every two weeks. These exercises are both tests and drills. As tests they indicate the measure of success of the teaching of expression during the other three-fourths of the time, and consequently will afford a basis for subsequent teaching, showing what faults in rhetoric and grammar that teaching should especially aim to correct. As drills, they afford opportunity to train the pupil in the mechanics of written expression.

It follows, then, that the problem in devising a scheme for the criticism of formal written compositions is how best to develop correct mechanics. The mechanical points introduced by the written composition are four: arrangement, spelling, capitalization, and punctuation. None of these has a place in oral expression; all four are unavoidable incidents to the formal written exercise. Arrangement (not to be confused with thought organization) applies to the proper adjustment of the written matter to the space at hand. Proper margins must be allowed at left and right of the page. In a theme, the title must be distinctly set apart from the subject matter; in a letter, the distinctive elements of address, subscription, etc., must occupy the conventional positions. The turning of the sheet from its obverse to its re-

ENGLISH IN THE UPPER GRADES

verse page must be in one direction or in another according to whether the collected sheets are to be bound at the top or at the side. Spelling, as it must be in a language so devoid of phonic consistency as is ours, is chiefly a matter of correct visualization and of effective training of the hand so that the writing of words correctly becomes for the most part submerged below the realm of conscious attention into that of automatic habit. Capitalization is but a phase of spelling with the distinction that it is particularly subject to the application of formal rules. Punctuation is to written expression what emphasis, pause, and gesture are to oral expression, and like these must be reduced to a subordinate position in the mind while it is engaged in conscious expression of thought.

With these considerations in mind the following scheme for the review of formal written compositions is offered:

1. All the pupils of the class are to write one such composition every fortnight.

2. The teacher is to read critically one half of these compositions each time. Thus each pupil will have his exercise reviewed once in four weeks.

3. The teacher will annotate each composition reviewed as follows:

- a. Indicate all errors in mechanical arrangement by the simplest marking of the paper or a statement

PROBLEMS OF THE ELEMENTARY SCHOOL

thereon; e. g., if the margin is not properly provided, draw a line showing the correct bounding of the margin. If the title is not sufficiently indented, indicate its correct position by vertical boundary lines.

b. Indicate each error in spelling by two crosses, one at the misspelled word and one in the margin on the same line.

c. Indicate each error in capitalization by a cross at the word and by a sign in the margin on the same line, thus: C5, meaning that capitalization rule 5 has been violated.

d. Indicate each error in punctuation by a cross at the place of error and a sign in the margin, thus: P12, meaning that punctuation rule 12 has been violated.

e. Do not indicate or correct errors in grammar or rhetoric; but at the top of the sheet write a brief critical statement of the composition as a whole.

4. No first-draft compositions are to be written at home.

5. Every pupil who receives his composition reviewed as above described is to rewrite it, preferably as a home exercise, correcting in the second draft all errors indicated on the first. In addition he will write correctly each misspelled word five times and every violated rule once, together with the incorrect sentence correctly written to show the application of

ENGLISH IN THE UPPER GRADES

the rule. This written work is to be submitted to the teacher within a certain time limit at the option of the teacher. The half of the class whose compositions are not reviewed make no second draft.

Corollaries to and explanations of these directions are:

1. It is understood that the limitation of one per fortnight applies only to the *formal* written composition. There will be frequent exercises of an informal character as already indicated.

2. The reading of half of the total number is merely a minimum requirement. Naturally, if a teacher will read more, the returns will be commensurate with the added labor.

3. No errors are actually corrected; they are only indicated.

- a. Penmanship may be included under this head to the extent of noting general criticisms, such as "Penmanship is careless," "Attend to slant in penmanship," "Avoid flourishes in penmanship," etc. Too much attention must not be paid, however, to the penmanship of the first draft, for the mind of the pupil must be concentrated upon verbal expression. More may be demanded in the second draft, for he is then relieved from the stress of composition.

- (b) The pupil is to discover for himself, by the use of the dictionary, the correct spelling.

PROBLEMS OF THE ELEMENTARY SCHOOL

(c) and (d) The pupil is to discover what constitutes his error by applying the rule cited in capitalization and punctuation.

(e) Errors in rhetoric and grammar are reachable in oral and in informal written exercises; hence their correction should be left in the main to those exercises. The pupil has sufficient difficulty in strengthening his habits of correct formal mechanics without introducing these other matters of thought-expression into the sole exercise which involves the mechanics. The language of our most honored professional authors is open to the criticism of competent experts. Art perfection is wholly a matter of degree, as shown, for instance, in the comparative ability of the primary pupil and his teacher. There is no absolute in art. With the mechanics it is different. The modes of arrangement, spelling, and for the most part punctuation, are arbitrarily fixed. The professional novelist and the grammar-school pupil are at a level when it comes to spelling; they must both reduce the drudgery of spelling to a habit, and when they have fixed the habit they will both find themselves spelling the same words in the same way, however wide may be the chasm between their respective abilities as literary artists. The pupil's shortcomings in style may be safely left unremarked when he is under the strain of literary expression plus attention to mechanical

ENGLISH IN THE UPPER GRADES

details. The teacher will by no means overlook these shortcomings, but will carefully note them and upon them build up his subsequent language teaching. He should, however, pass a definite general judgment upon each pupil's effort considered apart from its mechanical merits. This judgment will find expression in brief statements at the head of the sheet such as: An interesting story; Very entertaining; Consult me about paragraph three; Where is the verb in paragraph two?; You have improved much in construction; A very clever invention.

(4) There is much to be said against a pupil's writing a composition at home, as indeed there is against his preparing any written home work. At any rate, by having the original draft written in school the teacher has a guarantee of the authenticity of the pupil's work and thus insures to all pupils the opportunity for performing the school exercise under equally favorable environment.

(5) There is less danger in letting pupils write second drafts at home, for this work is almost entirely mechanical and involves no "composition." The rules laid down above as to the rewriting of misspelled words, etc., are quite arbitrary and may well be modified to suit varying conditions. Correct spelling must become a matter of habit. In misspelling a word the pupil's habit has followed in the wrong groove and in

PROBLEMS OF THE ELEMENTARY SCHOOL

consequence has deepened that groove. To insure its following the proper path the next time there is occasion to write the same word, it is not sufficient that he become aware that he made the error, but it is further necessary that he deliberately send his mental and muscular rolling stock—to change the metaphor slightly—over the proper track a number of times. What this number shall be, depends upon circumstances and particularly upon the personal coefficient of the individual pupil. If he is ordinarily a “good” speller, five is perhaps more than is necessary, though it can certainly do him no harm; if he is a “wretched” speller, perhaps ten would be none too many. The slip in capitalization or punctuation is also a habit gone wrong. Something here must be done to focus the attention not upon the error but upon the error corrected. This may be done by writing the violated rule, or by writing correctly the word miscapitalized or the sentence in which the punctuation error occurred, or by a combination of these two such as has been suggested above. To carry out this scheme of criticism, a set of rules for capitalization and punctuation must be agreed upon. Such will be found in every standard text in grammar. The rules should, however, be carefully graded, and all violations of rules not yet reached by pupils of any grade should be entirely disregarded.

ENGLISH IN THE UPPER GRADES

A suggestive graded set of such rules follows:

PUNCTUATION		
GRADE	RULE No.	RULE
4A	1x ¹	A PERIOD is placed at the end of every statement.
	2	A PERIOD is placed after every abbreviation.
	3x	A HYPHEN is used when a word is broken at the end of a line.
	4x	A QUESTION MARK is placed at the end of every question.
	5	QUOTATION MARKS are used to inclose words written or spoken by some other person exactly as given.
	6	An APOSTROPHE is used to show the omission of a letter or of letters.
4B	7x	An EXCLAMATION MARK is placed after a word expressing strong feeling.
	8	An APOSTROPHE is used in a noun to show that it expresses ownership.
5A	9	The name of a person addressed is set off by COMMAS.

¹ The x indicates that this rule is not stated in its final form. It reappears (in 6A) in new and final form when the pupil has learned the meaning of declarative and imperative sentences, at which time the form learned in 4A is dropped.

PROBLEMS OF THE ELEMENTARY SCHOOL

PUNCTUATION—*Continued*

GRADE	RULE No.	RULE
5B	10	A quotation is set off from the rest of the sentence by a COMMA or COMMAS, unless it is formally introduced.
	11	A HYPHEN is used to join the parts of compound words and expressions.
6A	1 (To replace 1x)	A PERIOD is placed at the end of every declarative and every imperative sentence.
	3 (To replace 3x)	A HYPHEN is used to show that one or more syllables of a word will be found at the beginning of the next line below.
	12	Two or more words in the same grammatical relation are separated from each other by COMMAS, unless <i>all</i> the conjunctions are expressed.
	13	When words connected by a conjunction follow in successive pairs, a COMMA is used after each pair.
6B	4 (To replace 4x)	An INTERROGATION MARK is placed at the end of every interrogative sentence, phrase, or word.

ENGLISH IN THE UPPER GRADES

PUNCTUATION—*Continued*

GRADE	RULE No.	RULE
6B	7 (To replace 7x)	AN EXCLAMATION MARK is placed after an exclamatory word, phrase, or sentence.
	14	An adverbial phrase preceding the verb and its subject, is usually followed by a COMMA.
	15	An adverbial phrase coming between the subject and the verb, or between the parts of the predicate, is set off by COMMAS.
	16	A word, a phrase, or a clause in apposition, unless it is closely connected with the word it modifies, is set off by COMMAS.
7A	17	PARENTHESES are used to inclose a remark that might be omitted without destroying the sense of the sentence.
	18	Certain adverbs (<i>again, first, finally, thus,</i> and the like), particularly when they begin a sentence, are usually set off by COMMAS.
	19	An adverbial clause preceding its principal clause, is followed by a COMMA.

PROBLEMS OF THE ELEMENTARY SCHOOL

PUNCTUATION—*Continued*

GRADE	RULE No.	RULE
7A	20	An adverbial clause introduced within a clause is set off by COMMAS.
	21	The omission of a predicate verb is indicated by a COMMA.
	22	A quotation or an enumeration of particulars, when formally introduced, is preceded by a COLON.
7B	23	A very long subject is usually separated from the predicate by a COMMA.
	24	When the same object follows two or more prepositions, a COMMA is placed after each preposition.
	25	When a quotation or an illustration is introduced by <i>as</i> or <i>namely</i> , a SEMICOLON is placed before the introductory word, and a COMMA after it.
	26	A DASH is used when a sentence breaks off abruptly.
8A	27	A nonrestrictive relative clause is separated by a COMMA from the noun or pronoun whose meaning it modifies.

ENGLISH IN THE UPPER GRADES

PUNCTUATION—*Continued*

GRADE	RULE No.	RULE
8A	28	The members of a compound sentence when they are not themselves subdivided by commas, and are related in meaning, are separated by COMMAS .
	29	The members of a compound sentence when they are themselves subdivided by commas, are separated by SEMICOLONS .
	30	A DASH is used when there is a sudden change in the thought.
8B	31	The members of a compound sentence, when they are themselves subdivided by semicolons, are separated by COLONS .
	32	A DASH is sometimes used before words which are used to explain the meaning of preceding words.

CAPITALIZATION

GRADE	RULE No.	RULE
3B	1	Begin with capitals the names of the days of the week and the months of the year.
4A	2	Begin with a capital the first word of every sentence.

PROBLEMS OF THE ELEMENTARY SCHOOL

CAPITALIZATION—*Continued*

GRADE	RULE No.	RULE
4A	3	Begin with a capital the first word of every line of poetry.
	4x	Begin with capitals all names of persons and places.
	5	Write the words <i>I</i> and <i>O</i> as capitals.
	6x	Begin with a capital every quotation.
4B	4y (To replace 4x)	Begin with capitals all names of persons and places and words formed from them.
	7	Begin with a capital every name or title of the Deity.
	8x	Begin with capitals the important words in the subject of any composition.
	9	Begin with a capital every title of honor or respect.
5B	8y (To replace 8x)	Begin with capitals the important words in the title of a book, or in the subject of any other composition.
6A	6 (To replace 6x)	Begin with a capital every direct quotation when it is a complete sentence.

ENGLISH IN THE UPPER GRADES

CAPITALIZATION—*Continued*

GRADE	RULE No.	RULE
6A	8 (To replace 8y)	Begin with capitals the important words in the title of a book, in the subject of any other composition, or in an epoch or event of history.
	10	Begin with capitals the names of points of the compass when they denote sections of a country.
	11	Begin with a capital the name of every religious denomination.
6B	4 (To replace 4y)	Begin with a capital every proper noun and every proper adjective.
8B	12	Begin with a capital every personified common noun.

In the formal oral composition the pupil is freed from consideration of mechanical points and hence may be more closely held to subject matter and expression. Declamations are of various sorts, chiefly according to the circumstances of their delivery. Among them are the oration, the speech, the lecture, the address, and the sermon. The pupil may be encouraged to regard his efforts as looking toward any of these. It must not be forgotten that he is in the elementary stage. His early declaiming will quite as closely resemble an oration as will his theme

PROBLEMS OF THE ELEMENTARY SCHOOL

the finished product of the mature essayist. He should make the same preliminary preparation in acquisition and organization as he does for the theme. He should learn to use the ordinary adjuncts in acquisition, such as notes, reference-books, statistical tables, reports, etc., and in organization, such as an outline of topics and subtopics. His progress in oral expression will be measured on the one hand by the increased ease and freedom from awkwardness with which he refers to these, and on the other hand by the degree to which he can free himself from their use.

In the elementary school the debate should be used sparingly and probably only in the higher grades. Its chief value, in addition to the interest which it may be made to arouse, is in promoting a breadth of view and a spirit of toleration. It is better that a pupil should not be interrupted in the course of his formal oral composition. The class and the teacher should be alert to note faulty organization and errors in expression. These may then, after the pupil has concluded, be made the subject of frank and impersonal discussion.

In addition to the two criteria which we have already seen must be applied in the classification of compositions, namely, those of rhetoric and of form of expression; the pedagogical factor necessitates yet

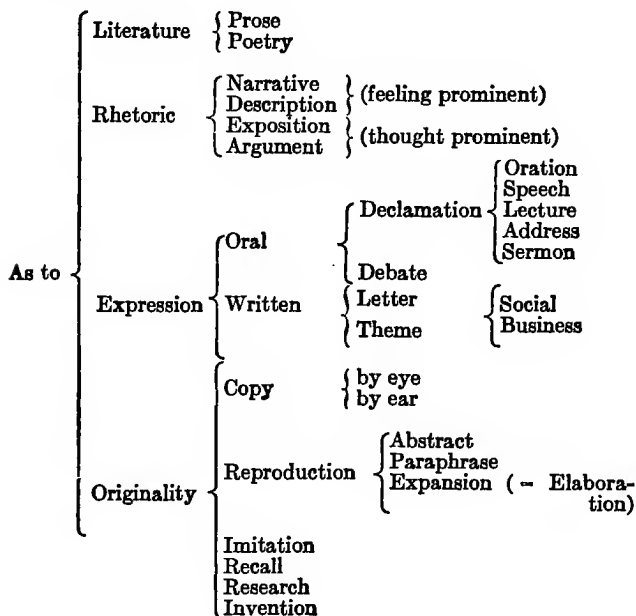
ENGLISH IN THE UPPER GRADES

another classification coördinate with these. The pupil is led through various stages of dependence upon models. In one sense he never fully gets away from a model, but there is an ascending scale through which his originality functions. The teacher, therefore, is forced to recognize several degrees of originality and classifies the formal composition accordingly. Lowest in the scale is the *copy*, either through eye or through ear, of the model, at which stage the pupil's originality is at a minimum, practically at zero. Next is *reproduction*, in which the pupil reproduces the model in thought but not in exact language. If he is deliberately abbreviating the model, he is producing an *abstract*; if deliberately amplifying it, an *expansion* or *elaboration*; if neither, a *paraphrase*. *Imitation* is the next higher stage, wherein style and general elements of form are reproduced without using the same thought substance. *Recall* is a form differing from reproduction in that the material used is supplied by memory and must be newly organized, and from imitation in that no model is employed. *Research* is the deliberate setting out for material, purposeful and specific acquisition, and differs from recall in that the latter is a search not in the present but in the past. Finally, when no model is used, and the raw material is the subject of neither recall nor research, but of

PROBLEMS OF THE ELEMENTARY SCHOOL

original creation, then is reached the highest degree of originality, *Invention*.

In conclusion, the following classification summarizes the criteria already noted as applying to the formal composition for purposes of elementary-school pedagogy



ENGLISH IN THE UPPER GRADES

GRAMMAR

It may be questioned whether the study of formal grammar should find any place in the curriculum of the elementary school, but there are few school systems which have yet had the hardihood to banish it. Whatever may be the psychology of the matter, it is certain that the analysis of sentences and the parsing of words present considerable difficulty to the average pupil, and any device which makes for the simplification of the subject is helpful.

The pupil must be led to see that analysis in grammar is merely a matter of descriptive classification, and that in this it differs but little from our ordinary daily classification of common things. Before us stands a person; we observe him, analyze him, and make note of the results of our analysis. We do not always formally state this result, but if we did, it would be succinctly something like this: person, boy, red hair, freckles, dimpled chin, long arms, bow legs, etc., etc. When, instead of a person, there stands before us a word, we have to go through the same process, and state the result as before, thus: word, noun, collective, common gender, objective case, etc. Now there may be no inaccuracies in the statement of the analysis either of the boy or of the word, but the pupil must learn that as

PROBLEMS OF THE ELEMENTARY SCHOOL

grammar is a science, there has long since been established a conventional form of analysis.

When the government agent issues a passport, he has to enter upon his record a description of the person to whom it is issued. He might describe that person in a three-page essay, but that is not required of him. His government has already prescribed the form of his record, and it is left to him merely to enter the specific results of his analysis in their appropriate places. For instance, his record form may call for analysis of the person in respect to Sex, Age, Height, Weight, Complexion, Color of Eyes, etc., and his only duty is to make the entry in the blank space opposite each item. Moreover, if he were making an oral analysis of the person to, let us say, some other official who understood the form prescribed, he would not describe him by any such circumlocution as: Well, he is a boy; and he says he is twelve years old but he looks to be fifteen; he's tall for his age, I should say five feet eight inches, and so on. Instead, he would give a mere summary of results in this fashion: Male, twelve, five-eight, blond, and so forth.

In the same way certain conventional forms have been established for the analysis of sentences and words, and the pupil must be made to recognize this, so that his parsing of the word *man*, for example, is

ENGLISH IN THE UPPER GRADES

not the discursive guesswork which we so frequently hear: *Man* is a, is a noun, it's in the third person, masculine gender, it's a common noun. . . . What should be required is a crisp catalogue of characteristics, thus: Man, noun, common, third, singular, masculine, nominative, subject of the verb *threw*. The pupil may understand that the order in which these characteristics is to be given is largely arbitrary, but it is no less binding upon him to conform with this conventional requirement.

Hence when the pupil begins his work in formal analysis he should be provided with the conventional form which is to be used throughout all his subsequent study of grammar. He may have this form before him, just as the passport writer or any other cataloguer has his list of required items before him. After a while we expect the pupil to reach the point where he is not dependent upon the form, that is, where he has learned the various items and the order in which they stand. This form is to be regarded as one of the pedagogic crutches, of which we have to use so many, and the general rule as to the use of crutches applies here. The crutch is for the lame only; just as soon as the lameness can be made to disappear, take away the crutch. Not to provide a crutch to the lame is cruelty; to keep a sound person on crutches is absurd. Accurately to measure each pupil's need of such

PROBLEMS OF THE ELEMENTARY SCHOOL

a help is one of the characteristics of a superior teacher.

This form may be provided the pupil as a printed sheet, or he may write it for himself on dictation at the beginning of the term, or, as a chart, it may be kept ready for display before the class. The form here given has proved satisfactory, and requires but little explanation. In following it, the pupil learns that he must first state whether the word or group of words which he is considering is a sentence, a phrase, or a word (grammatically speaking). He then, from *each line* in what follows, selects the particular designation which describes the word or words which he is analyzing. The words in parenthesis are key words and are not to be given in the analysis. Designations marked † † may not apply at all in some cases:

SENTENCE:

(use) declarative; imperative; interrogative

† exclamatory †

(form) simple; compound; complex

(if simple) * subject:

predicate:

† (complement) object: ;

attribute: †

† subject modifiers: †

† predicate modifiers: †

† complement modifiers: †

ENGLISH IN THE UPPER GRADES

SENTENCE:—Continued

(if compound) first member:
 second member:
 † third member: †
 etc.
 † connective(s): †
 (proceed from *)

(if complex) principal clause:
 subordinate clause(s):
 (with syntax)
 (proceed from *)

PHRASE:

(use) noun; adjective; adverbial
(form) prepositional; infinitive; participial
(syntax=)

(Word):

NOUN:

(class) proper; common
(person) first; second; third
(number) singular; plural
† collective †
(gender) masculine; feminine; neuter; common
(case) nominative; possessive; objective
(syntax=)

VERB:

(class) regular; irregular
(principal parts=) , , ,
(use) transitive; intransitive; copulative
(if transitive, voice) active; passive

PROBLEMS OF THE ELEMENTARY SCHOOL

VERB:—*Continued*

- (mood) indicative; potential; subjunctive; imperative
- (tense) present; past; future; present perfect; past perfect; future perfect
- (form) simple; progressive; emphatic
- (syntax =)

ADJECTIVE:

- (class) descriptive; demonstrative
- (comparison) positive; comparative; superlative
- (syntax =)

ADVERB:

- (class) time; place; degree; manner; interrogation; negation; assertion
- (comparison) positive; comparative; superlative
- (syntax =)

PRONOUN:

- (class) personal; relative; interrogative; adjective
- (person) first; second; third
- (number) singular; plural
- (gender) masculine; feminine; neuter; common
- (case) nominative; possessive; objective
- (syntax =)

ENGLISH IN THE UPPER GRADES

PREPOSITION:

(syntax =)

CONJUNCTION:

(class) coördinating; subordinating

(syntax =)

INTERJECTION:

VERBAL:

(class) participle; infinitive

(if participle) noun; adjective

(if infinitive) noun; adjective; adverbial;
predicate

(syntax =)

V

HISTORY FACTS

IN discussing examinations in my book on "Management," I endeavored to draw very sharply the distinction between the testing of the memory and of the judgment. "Memory tests concern the *products* of judging; Judgment tests concern the *processes* of judging." Just as we must make this distinction in the testing of school work, so must we carry this distinction throughout the work itself, for, as I quoted from Bain, there are "the two different intellectual energies, called respectively, Memory and Judgment." Much of our failure to secure what we call "results" comes from failure to recognize this fundamental distinction. In all of the content studies we present a great variety of data, both facts and principles, with no expectation that the pupil will either remember or be able to recall any considerable number of these data.

To put it into mathematical terms, for the sake of clearer illustration, let it be assumed that in the teaching of an hour's lesson in geography, one hun-

HISTORY FACTS

dred distinct facts have been presented. At the close of the hour the number of these facts that have been absorbed by the different pupils of the class will vary to a large degree. The phlegmatic A has caught and held five of these; the nervously attentive B, twenty; C, who has given but indifferent attention, ten; and so on throughout the class. Now while this variation in acquisition is to be expected and cannot be prevented, we are at least responsible to see that five of the facts that A and B and C each get are five of the important ones and not five lacking in vital significance. The greatest common divisor of the numbers of facts each pupil acquired should consist of the most significant and important of the hundred facts presented. That is, although our lesson, through pedagogic considerations, has included the presentation of a host of data, there is a small selection of these which it is really important that the pupil should remember. All of the data are in a sense important, yet this selected group is necessary to him, and so it is our duty to compel him to get this group, whatever becomes of the rest of the material.

For example, if the pupil remembers some incident which befell Captain Peary on his trip to the Pole, enlivening and interesting and true as that incident may be, and fails to learn and carry with him the fact that it was the North Pole and not the South Pole

PROBLEMS OF THE ELEMENTARY SCHOOL

which he visited, the pupil cannot be credited with having "learned his lesson." Again, the apochryphal narrative concerning the Father of his Country and the mischievous hatchet may serve to add zest and background to the study of Washington, but if the child recalls this and remains ignorant of the fact that Washington was the first President of the United States, the history lesson has not been a true success. But this is just what is likely to happen unless the teacher takes special precautions. Each lesson must be thoroughly clinched after the facts have been driven home. It is not sufficient to trust to luck that the pupil is retaining the essentials of a lesson, or that he is carrying the essentials of any subject through its successive lessons.

It has been found practicable in managing a school to provide a schedule of important facts in certain subjects, notably history, which shall serve as the skeleton upon which the pupil shall hang all his study of the subject. The memorizing of any one of these facts is never to precede the presentation by the teacher and the consideration by the pupil of all the material surrounding this fact. There is a serious danger, however, that without final concentration of the attention upon the essential points of history, the chronological perspective will be lost. The following sets of facts, one in American, and the other

HISTORY FACTS

in English history, have proven satisfactory. The facts are memorized in the grades indicated, and are constantly reviewed in the succeeding grades. By this means each pupil has always at hand an appropriate background against which he may put, in its proper place, whatever comes to him in his study of history, his general reading, or his discussion of current topics.

UNITED STATES HISTORY

Discovery

- (5A) 1. Columbus discovered America in 1492 and established Spanish claim to territory.
2. The Cabots discovered the mainland of North America in 1497 and established English claim to territory.
3. America was named for Americus Vesputius.
4. Raleigh made two attempts to found a colony in Virginia, and though they were unsuccessful they turned the thought of the English toward the New World.
5. Cartier's discovery of the St. Lawrence and La Salle's exploration of the Mississippi, established French claim to territory.
6. Hudson explored the Hudson River in 1609 and established Dutch claim to territory.

PROBLEMS OF THE ELEMENTARY SCHOOL

Settlement

- (5B) 7. The first permanent English colony was founded at Jamestown, Virginia, 1607.
8. Slavery was introduced into Virginia in 1619.
9. Massachusetts was first settled by the Pilgrims, at Plymouth, 1620.
10. New Netherlands was first settled by the Dutch, who founded New Amsterdam in 1626, but was conquered by the English in 1664.
11. Pennsylvania was settled by William Penn and other Quakers.
12. Maryland was settled by Lord Baltimore and other Catholics.

Colonial Wars

13. Four colonial wars were waged between France and England because both countries claimed the territory between the Allegheny River and the Rocky Mountains.
14. The last and most important of the colonial wars was the French and Indian, 1755-1763.
15. The enmity of the Iroquois toward the French was a valuable aid to the English in controlling the Hudson Valley.
16. The battle of Quebec, 1759, was one of the most important in United States history as it put an end to French power in America.

HISTORY FACTS

The Revolution

- (6A) 17. The Revolutionary War, 1775-1783, was caused by England's unjust treatment of her colonies, as to taxation and trade laws.
18. The Declaration of Independence was signed at Philadelphia, July 4, 1776.
19. In the battle of Long Island, August, 1776, the Americans were defeated and forced to retreat eventually to New Jersey.
20. The battle of Trenton, December 25, 1776, was an encouraging victory for the Americans.
21. By the surrender of Burgoyne's army, 1777, the English were prevented from carrying out their plan to divide the colonies along the Hudson.
22. The victory at Saratoga finally decided the French to aid the Americans.
23. The Revolutionary War was concluded by the surrender of Cornwallis to Washington, at Yorktown, 1781.
24. By the treaty of Paris, 1783, at the close of the Revolutionary War, England recognized American independence, and boundaries were fixed at the Mississippi River, Florida, and Canada.

The Nation

25. The many weaknesses of the Articles of Confederation, under which the colonies had

PROBLEMS OF THE ELEMENTARY SCHOOL

been governed, led to the adoption of the Constitution in 1788.

26. George Washington was inaugurated first President of the United States in 1789.

27. Our national capitals have been New York, Philadelphia, Washington.

28. Louisiana Territory was purchased from France in 1803, and afterwards explored by Lewis and Clark.

29. The Second War with England, 1812-1815, was caused by British impressment of American sailors and other interference with American commerce.

30. Perry's victory on Lake Erie and Harrison's victory at the Thames River gave the United States control of Lake Erie and saved the Northwest Territory.

31. The treaty of peace was signed December, 1814, though the battle of New Orleans was fought the next month.

32. The Second War with England secured independence for American commerce and gained the respect of European nations for the United States.

(6B) 33. Florida was purchased from Spain in 1819.

34. By the Missouri Compromise, 1820, Missouri was admitted as a slave State, while

HISTORY FACTS

slavery was prohibited in all of the rest of the Louisiana Territory north of 36 degrees, 30 minutes.

35. The Erie Canal was completed in 1825.

36. The first American railroad was operated in 1828.

37. The Mexican War, 1846-1848, was caused by the annexation of Texas and dispute over its southern boundary.

38. The Americans were uniformly successful throughout the Mexican War, which was concluded by the capture of Mexico City under General Scott.

39. The results of the Mexican War were the fixing of the boundary at the Rio Grande, and the purchase from Mexico of California and New Mexico.

40. Gold was discovered in California in 1848.

41. By the Compromise of 1850 California was to be admitted as a free State, and Utah and New Mexico as they might decide.

42. The Kansas-Nebraska Law, 1854, repealed the Missouri Compromise by allowing new States to decide the slave question for themselves.

43. The Dred Scott Decision, 1857, virtually permitted slavery in free States.

The Civil War

44. The Civil War, 1861-1865, was caused by slavery, and more directly by the secession of the Southern States.

45. In the Civil War the plan of the North was to blockade Southern ports and thus cut off supplies to the Confederacy; open up the Mississippi and thus divide the Confederacy; and to capture Richmond, the seat of the Confederate Government.

46. The *Monitor-Merrimac* engagement, 1862, was the beginning of the effective blockade of the Southern ports.

47. By Lincoln's Emancipation Proclamation, January 1, 1863, the slaves were freed in the seceding States.

48. The attempt of the Confederates to invade the North was decisively checked by the battle of Gettysburg, July 1-3, 1863.

49. The Confederacy was divided at the Mississippi by the capture of Vicksburg, July 4, 1863; and across Georgia by Sherman's march to the sea in 1864.

50. Lee left Richmond and surrendered in April, 1865.

51. President Lincoln was assassinated in April, 1865.

52. The Civil War resulted in the abolition of slavery and the reunion of the States.

HISTORY FACTS

Reunion

- 53. Alaska was purchased from Russia in 1867.
- 54. The War with Spain, 1898, was caused by cruel treatment of Cubans by Spaniards.
- 55. The chief events of the Spanish War were the capture of Manila and of Santiago.
- 56. As the result of the Spanish War, Cuba was freed, Porto Rico was ceded to the United States, and the Philippines were bought from Spain.

Industrial

- 57. Important American inventions in their chronological order are: Whitney's cotton gin, Fulton's steamboat, Morse's telegraph, Field's ocean cable, Bell's telephone.

ENGLISH HISTORY

Roman Britain and Saxon England

- (7A) 1. Cæsar first landed in Britain in 55 B.C., and the Romans began settling there soon after.
- 2. In 410 the Romans left Britain and the country was next settled by the Saxons.
- 3. Of the Saxon kings, Egbert was the first to be called King of England, and Alfred was the wisest and greatest.
- 4. England was conquered by the Danes in 1013, and was ruled for a while by Danish kings.

PROBLEMS OF THE ELEMENTARY SCHOOL

The Normans and Plantagenets

5. By the victory at Hastings, 1066, William the Conqueror established the Norman line of kings.
6. Henry II became king in 1154, establishing the Plantagenet line.
7. Ireland came under English rule during the twelfth century and Wales during the thirteenth.
8. From the Plantagenet kings the people wrested political rights, securing the Magna Charta in 1215 and the House of Commons in 1265.
9. The Scots repulsed the English at the Battle of Bannockburn, 1314, and became an independent nation in 1328.
10. Wiclif and Chaucer, of the fourteenth century, were the first important names in English literature.
11. The Hundred Years' War, 1338-1453, was an unsuccessful attempt to secure the French crown for English kings.
12. The deposition of Richard II in favor of Henry IV led to the War of the Roses between the houses of Lancaster and York.
13. The battle of Bosworth Field, 1485, ended the War of the Roses and established the Tudor line under Henry VII.

HISTORY FACTS

The Tudors

14. During the reign of the Tudors there was a "Revival of Learning" brought about by explorations and discoveries and the invention of printing.

15. Spain's attempt to conquer England was ended by the defeat of the Armada in 1588.

16. The reign of Elizabeth was especially brilliant and was marked by political, commercial, and literary activity.

17. Among the leading men of the Elizabethan period were Drake, Frobisher, and Raleigh in exploration, and Spenser, Bacon, and Shakespeare in literature.

The House of Stuart

- (7B) 18. James I, son of Mary Queen of Scots, succeeded Elizabeth in 1603, and thus established the Stuart line.

The Commonwealth and Protectorate

19. The treacherous and arbitrary rule of Charles I led to civil war, the execution of the king, in 1649, and The Commonwealth and Protectorate.

The Restored Stuarts

20. In 1660, the Stuarts were restored to the throne under Charles II.

PROBLEMS OF THE ELEMENTARY SCHOOL

21. Prominent names in literature under the Stuarts were Milton, Bunyan, Addison, and Pope.

The Orange-Stuart Period

22. The reign of William and Mary was marked by increase in religious and political liberty and freedom of the press.

23. England and Scotland were reunited in 1707.

24. By Queen Anne's War England gained Gibraltar, Hudson Bay Territory, Nova Scotia, and Newfoundland.

25. The Stuart line ended with Anne, who was succeeded in 1714 by George I of Hanover.

The House of Brunswick

26. Under George I, Walpole established the modern cabinet system, and became the first prime minister.

27. English rule in India was established by Clive in 1756.

28. The capture of Quebec, by Wolfe, in 1759, secured Canada to England.

29. The American Revolution occurred during the reign of George III and resulted in English recognition of American independence in 1783.

30. Eighteenth-century literature included Johnson, Goldsmith, and Burns.

HISTORY FACTS

31. In the War with France, decisive victories were gained at the naval battle of Trafalgar in 1805, and the land battle of Waterloo in 1815.

32. English slave trade was abolished in 1807, and the slaves were emancipated in the colonies in 1833.

33. The invention of the steam engine and of textile machinery during the reign of George III led to the factory system and stimulated mining and commerce.

34. Factory reform and the repeal of the corn laws, in the middle of the nineteenth century, contributed to the betterment of social conditions.

35. Under Victoria occurred the Opium War with China, the Sepoy rebellion in India, the Crimean War with Russia, and the Boer War in South Africa.

36. Nineteenth-century literature included Scott, Macaulay, Dickens, Thackeray, and Tennyson.

37. The present government of England is republican in character and the rule of the sovereign is nominal.

VI

SOME DEVICES IN ARITHMETIC

THE FUNDAMENTAL OPERATIONS

THE distinction between Judgment and Memory holds as well for the formal studies as for the content studies. In fact, there is even greater necessity that a substantial fund of memorized judgments shall be accumulated in the study of arithmetic, for instance, than for history or geography. The elementary judgments of arithmetic, once memorized, must be subject to a recall so immediate as to merge into habit. When the pupil has once acquired the concepts of the symbols 9 and 8, and their product 72, his further effort is to be concentrated upon fastening these symbols in this relationship, so that to the presence of 8×9 , his mind may instantly react with the thought 72. The teaching of the fact that 8 times 9 is 72 will require an appeal to the pupil's judging faculty; but, this once accomplished, it will be a decided detriment to the pupil if, on future occasions calling for the multiplication of 8 by 9, he is obliged to retravel the

SOME DEVICES IN ARITHMETIC

judging process. The intrusion of the judging attitude while he is multiplying is a distinct embarrassment, and the more completely habit controls the process the better equipped is he for doing such work. The appeal to the reasoning power of the child constitutes a very large duty in our work in arithmetic, but we are not justified in pursuing this phase at the expense of the development of effective, habitual reactions in performing the fundamental operations. We need then to employ every device available which will help to reduce these reactions to the state of automatism.

We are all familiar with the use of the drill cards in number work. I have found, however, that following the emphasis placed upon the multiplication table in the early school years, there is a marked weakness in the ability of the pupils to add and subtract when they reach the higher grades.¹ How to reach this difficulty has been a problem, and a partial solution has been found in the scheme which I here describe. We have already had occasion to refer (see page 49) to Dr. Bagley's statement of the law of habit building: "Focalization of consciousness upon the process to be automatized, plus attentive repetition of

¹ This was clearly brought out in a test conducted in thirty-four classes of grades 4B-8B, before the work outlined here was undertaken. The following one hundred combinations

PROBLEMS OF THE ELEMENTARY SCHOOL

this process . . .” The two key words of this law are attentive and repetition. We are familiar with

were used, to which pupils gave oral answers, speed being emphasized:

8×8	$64 \div 8$	$67 + 8$	$62 - 8$
5×5	$25 \div 5$	$54 + 7$	$33 - 7$
6×7	$42 \div 6$	$39 + 5$	$92 - 6$
3×9	$27 \div 3$	$45 + 8$	$44 - 5$
8×7	$56 \div 8$	$49 + 3$	$88 - 9$
4×6	$24 \div 4$	$56 + 5$	$57 - 8$
12×0	$0 \div 12$	$38 + 7$	$75 - 7$
9×3	$27 \div 9$	$67 + 8$	$66 - 8$
7×6	$42 \div 7$	$97 + 6$	$65 - 6$
8×9	$72 \div 8$	$75 + 7$	$76 - 7$
9×7	$63 \div 9$	$89 + 8$	$54 - 8$
6×5	$30 \div 6$	$86 + 9$	$83 - 9$
6×9	$54 \div 6$	$78 + 3$	$47 - 8$
4×5	$20 \div 4$	$97 + 5$	$92 - 5$
2×3	$6 \div 2$	$67 + 8$	$38 - 9$
9×9	$81 \div 9$	$35 + 6$	$48 - 9$
7×9	$63 \div 7$	$59 + 2$	$87 - 8$
5×8	$40 \div 5$	$46 + 8$	$94 - 5$
9×5	$45 \div 9$	$48 + 8$	$56 - 8$
8×6	$48 \div 8$	$57 + 7$	$71 - 4$
7×7	$49 \div 7$	$37 + 4$	$35 - 8$
5×7	$35 \div 5$	$65 + 6$	$53 - 6$
12×4	$48 \div 12$	$99 + 5$	$84 - 7$
7×11	$77 \div 7$	$76 + 7$	$42 - 8$
8×1	$8 \div 8$	$88 + 3$	$63 - 5$

The results showed average percentages of correct answers as follows:

Multiplication.....	94.0
Division.....	91.4
Addition.....	78.0
Subtraction.....	57.2

SOME DEVICES IN ARITHMETIC

the old law that attention and drill are reciprocal, that the greater the attention the less the amount of drill required to secure a given result, and conversely. Moreover, the law is equally old and reliable which tells us that attention is largely dependent upon interest; so that the pedagogic prescription is: interest the pupil and he will attend; if he attends, he will acquire.

Our problem then is not only to devise a drill in the fundamental operations which shall be a proper one, but so to conduct it, by the creation of a moving interest, that no loss shall accrue from lagging attention. For this drill we use sight cards of the usual type; for the interest we use a stop watch or, if a stop watch is not available, any ordinary watch with a second hand.

Both in addition and subtraction, those combinations which involve "carrying" of the units place are most troublesome. There are comparatively few errors made in such combinations as $52 + 3$, $65 + 4$, $48 - 3$, etc. In addition, the carrying combi-

This was at an average speed of 7 minutes, 22 seconds, for all 100 combinations. It will be noted that all the combinations in addition and subtraction involve carrying. As the experienced teacher might have prophesied, the greatest number of failures in multiplication and division were on 12×0 and $0 \div 12$, pointing to the need for special drill on these particular combinations.

PROBLEMS OF THE ELEMENTARY SCHOOL

nations, those which the pupil meets in adding a column of figures—are:

82+9	72+9	62+9	and so on to	.	.	12+9
83+9	73+9	63+9	to	.	.	13+9
83+8	73+8	63+8	to	.	.	13+8
84+9	74+9	to	.	.	.	14+9
84+8	to				14+8
84+7	to				14+7
85+9	to				15+9
.						.
.						.
.						.
.						.
85+6						15+6
86+9					.	
.						
.					.	
.						
86+5					.	
.					.	
.						
.					.	
.						
.					.	
.						
.					.	
89+2						19+2

There are 288 of these combinations. The corresponding set for subtraction is:

SOME DEVICES IN ARITHMETIC

[illegible]

Figure 1 consists of two scatter plots side-by-side. The left plot is labeled '91-2' and the right plot is labeled '11-2'. Both plots show a positive correlation between the number of children (x-axis) and the number of children who are not in the sample (y-axis). The right plot has a steeper slope than the left plot.

There are 324 of these, making a total of 610 for both. These are broken into six series of one hundred cards each, of practically equal difficulty. Series I consists of:

82+9

73 + 9

63 + 8

 $54 + 9$

85 + 9

 $15 + 8$

16+6

PROBLEMS OF THE ELEMENTARY SCHOOL

and so on, made up of one hundred combinations, plus and minus, selected diagonally from among the total. Series II consists of the next diagonal selection, and so on.

These cards, used all of one series each day, are divided into two fifties, one fifty to be shown, one by one, to the class, and the other fifty to be dictated. Pupils state the result of the combinations in order, each pupil one, around the class as many times as required. In case of failure, the card is put aside for special drill, and the next pupil given the next combination. The number of errors made is noted, and also the elapsed time for the entire exercise of one hundred cards.

To give the necessary stimulating interest, the elapsed time is regarded as a score and the class is urged to reduce its own record or to defeat the score of another class of the same grade. In a small school where there is but a single class in a grade, the class may be divided into two competing groups.

It is clear that as a means of comparison between two classes or groups, neither the time alone nor the percentage of correct answers can be regarded as a just basis. One class might go through the exercise in five minutes, and another in three minutes; but the speed of the second might be due to carelessness in answering. On the other hand, one class scoring 95

SOME DEVICES IN ARITHMETIC

per cent of correct answers as against the 80 per cent of another class, might owe its success to the extra amount of time consumed. It is necessary then to combine these two factors of speed and accuracy into a single "score." To do this, we divide the speed, expressed as a whole number of seconds, by the degree of accuracy expressed as a decimal. For example, if the class takes 6 minutes 14 seconds for the exercise and has .91 of correct answers, $374 \div .91 = 411$, and 411 is the "score" for the class. An increase both of speed and accuracy will of course reduce this score; for instance, 94 correct cards in 5 minutes 49 seconds, $349 \div .94 = 371$. A bettering of either factor, the other remaining constant, will decrease the score; for instance, 91 cards in 5 minutes 49 seconds, $349 \div .91 = 383$; and 94 cards in 6 minutes 14 seconds $= 398$. A bettering of one factor alone, may or may not reduce the score; for instance, 90 cards in 4 minutes 30 seconds, and 80 cards in 4 minutes, each give a score of 300 ($270 \div .90 = 300 = 240 \div 80$). The score is always kept in whole numbers, a fraction being discarded or carried to the next unit, according to whether it is less than one half, or equals or exceeds it. Pupils answer while sitting, thus saving the time otherwise consumed by rising. Pupils are given one chance only on each card; that is, no credit is allowed a pupil giving a wrong answer and then correcting

PROBLEMS OF THE ELEMENTARY SCHOOL

himself. In dictating questions the teacher varies the form, thus: 17 subtract 9, 23 less 8, 83 take away 7, had 73 lost 9; 65 and 9, 26 add 8, 45 plus 7, etc. In our playrooms we keep bulletin boards showing the best score to date, by grades, crediting the class in the grade which holds the record.

Teachers are directed to have this exercise daily, and they record the score on the blackboard, making a special note each time a record is broken. This score, however, is not accepted as official as a comparative guide between classes. For the official score the principal visits the room and, while the teacher conducts the exercise, keeps the record of accuracy, notes the time, and calculates the score. His attitude toward the work of the class, one of encouragement or criticism, according to the quality of their performance, makes for improvement. The first scores which we made after instituting this system were, for classes of the grades indicated:

8B	378	273	365	
8A	442	480	437	
7B	460	429		
7A	450	424	431	565
6B	448	505	559	424
6A	603	575	553	842
5B	471	597	421	568
5A	683	570	664	
4B	825	683		

SOME DEVICES IN ARITHMETIC

After one year, the best scores, for each grade, were :

<i>Best score</i>	<i>Year</i>	<i>previous</i>
8B	229	273
8A	297	437
7B	374	429
7A	391	424
6B	246	424
6A	331	553
5B	338	421
5A	422	570
4B	425	683

This shows a present average best score of 339 as against 424 the year previous, or a general gain of twenty per cent. It is of incidental interest to note that the score for the cards by sight is almost invariably less than that for those by hearing. In many cases I have timed each fifty cards separately and thus obtained independent scores. These average to the effect that the sight cards take but forty-one per cent of the gross time, and the hearing cards the other fifty-nine per cent.

That pupils could be trained to improvement in this work was to be expected, and the fact that they did so improve is perhaps not a sufficient justification for the device, which, after all, is but a device and is not to be mistaken for an end in and of itself. To express general improvement in mathematical terms

PROBLEMS OF THE ELEMENTARY SCHOOL

is not always possible, nor is it always the most telling expression. However, I questioned all teachers who had been using this method for a year, as follows:

1. Is there an appreciable improvement in pupils' accuracy in their computations in oral and written mathematics? If so, roughly speaking, what per cent of gain has been made?

2. Have these drills had any effect upon the average ability of pupils to reason in mathematics, whether to improve or to impair that ability?

3. Do you note any other advantages which have accrued from these drills?

4. When you introduced Series II, what was the effect upon the results in Series I? If possible, give answer in mathematical terms, e. g., the class could do Series I in about 300; by the time they were able to do Series II in 300, they had fallen back to 320 for Series I.

5. What modifications of the method do you suggest?

The answers to the first question ranged from zero to sixty per cent. One teacher reported "no appreciable improvement"; another, "slight"; another, "not much." All others reported gains of five per cent or more, and the average was 14.6 per cent. That is, roughly speaking, the drills have bettered the

SOME DEVICES IN ARITHMETIC

accuracy of pupils' work by fifteen per cent, which we consider worth while.

The general answer to the second question was "no effect." There were a few exceptions, however. One says, "Pupils' ability to reason is improved through raising the ideal of speed and accuracy."

Among the "other advantages" accruing from the drills, several speak of the increase in the power of sustained attention; others, of the contribution to a good class spirit; and others, of the value of the emphasis placed upon addition and subtraction as compared with the other processes.

Only six out of thirty-four were able to reply in mathematical terms to the fourth question. Their estimates would average to this statement: "The class could do Series I in about 292; by the time they were able to do Series II in 292, they had fallen back to 324 for Series I.

Various replies were received to the fifth question, but none seemed important.

Another measure of the improvement effected was found in the repetition of the test referred to on page 133. One year after that test was made, the identical combinations were given to the classes of the same grade. Although the number of classes in each grade had changed some, it so happened that

PROBLEMS OF THE ELEMENTARY SCHOOL

the total number of classes was the same, 34. The comparative results were:

	<i>Former test</i>	<i>Latter test</i>
Multiplication.....	94.6	91.7
Division.....	91.4	91.3
Addition.....	78.0	81.4
Subtraction.....	57.2	75.6
	<hr/>	<hr/>
Average.....	80.2	84.9

This shows a very substantial gain in the subtraction work, which had been extremely weak before. The multiplication shows a slight falling off and the division is at a standstill, due, perhaps, to the emphasis which had been placed upon the other two operations.

The net gain of 4.7 per cent does not fairly express the improvement, in that it does not take account of the time factor. The 80.2 per cent was obtained at an average speed of 442 seconds, while the 84.9 per cent was at an average of 323 seconds. Equating these two factors, the comparative figures for the two tests are 551 and 380, showing a reduction in the time-accuracy score of 31 per cent.

SOME DEVICES IN ARITHMETIC

A SPECIAL EXERCISE IN FUNDAMENTAL OPERATIONS

One of the exercises frequently employed for the development of the power of rapid calculation consists in the performing of a series of operations dictated by the teacher. For example: 8, multiply by 4, add 18, divide by 5, subtract 7, multiply by 15, subtract 12, divide by 11; answer = ? A special interest may be injected into such an exercise if the teacher occasionally permits each pupil to select his own starting number, and then, miraculously to the class, brings them all to the same correct result.¹

To do this, of course it is necessary for the teacher to follow the operations in general terms, that is, by algebra, while the pupils are working in terms of arithmetic; and the secret of the uniform results lies in eliminating the special number selected at some time before the operations are completed. For instance: Select a number, add 5, multiply by 4, subtract 12, divide by 4, subtract the number selected; answer = ? One pupil selects 4, another 5, another 8, another 15, and so on, without announcing beforehand what his

¹ The reader may recall how Edward Eggleston's "Hoosier Schoolboy" puzzled his mates with a problem of this kind.

PROBLEMS OF THE ELEMENTARY SCHOOL

number is. Their work is represented respectively, thus:

4	5	8	15
<u>+5</u>	<u>+5</u>	<u>+5</u>	<u>+5</u>
9	10	13	20
<u>×4</u>	<u>×4</u>	<u>×4</u>	<u>×4</u>
36	40	52	80
<u>-12</u>	<u>-12</u>	<u>-12</u>	<u>-12</u>
4) 24	4) 28	4) 40	4) 68
<u>6</u>	<u>7</u>	<u>10</u>	<u>17</u>
-4	-5	-8	-15
<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

The teacher's thought in the meantime is:

×	=any number
× + 5	add 5
4 × + 20	multiply by 4
4 × + 8	subtract 12
× + 2	divide by 4
2	subtract the number.

A teacher must guard against making too free a use of this exercise, which is a form of spice, and must not be sprinkled with too free a hand. Two or three such problems occasionally interpolated in a morning's work will serve a purpose which could not be gained by twenty of them given in succession. A

SOME DEVICES IN ARITHMETIC

teacher who is at all apt in algebra may readily construct these problems as he proceeds. A few, however, are here given, thirty for oral drill and twenty for written.

ORAL

1. Any number $\times 9 + 12 \div 3 - 1 \times \frac{2}{3} + 14 \div 2$
- the number = 8
2. Number $+ 3 \times 4 - 6 \div 2 + 5 \div 2 -$ number
= 4
3. Number $+ 15 - 11 \times 4 - 12 \div 2 - 2 \div$ num-
ber $+ 3 = 5$
4. Number $+ 5 \times 6 - 14 \div 2 + 13 \div 3 -$ num-
ber $+ 3 \div 5 = 2$
5. Number $- 1 \times 8 + 10 \div 2 + 7 \div 4 -$ number
 $\times 5 - 1 \div 3 = 3$
6. Number $\times 5 - 7 \times 2 + 24 \div 10 -$ number $+ 5 \times 3 - 3 = 15$
7. Number $\div 2 + 7 \times 4 - 18 \div 2 -$ number $\times 5 - 7 = 18$
8. Number $+ 12 \div 4 + 6 \times 4 - 36 \div$ number $+ 8 \div 3 = 3$
9. Number $- 2 \times 8 + 32 \div 4 + 18 \div 2 -$ number
 $+ 5 = 16$
10. Number $\times 10 - 18 \div 2 + 9 \div$ number $\times 4 - 2 \div 3 = 6$
11. Number $\div 5 + 2 \times 10 - 12 \div 2 -$ number $\times 3 - 2 = 10$
12. Number $+ 7 \times 6 - 8 \div 2 - 17 \div$ number $\times 7 - 1 = 20$

PROBLEMS OF THE ELEMENTARY SCHOOL

13. Number $- 1 \times 5 + 13 \times 2 - 16 \div$ number $\times 5 + 7 = 57$
14. Number $\times 6 + 3 \div 3 + 15 \div 4 - 3 \times 2 -$ number $= 2$
15. Number $\div 2 + 7 \times 4 - 22 \div 2 - 3 \div$ number $= 1$
16. Number $\times 3 + 12 \div 3 - 2 + 8 -$ number $+ 5 \times 2 = 30$
17. Number $- 2 \times 10 + 25 \div 5 + 3 \div 2 -$ number $\times 8 - 1 = 15$
18. Number $+ 6 \div 2 + 5 \times 4 - 12 \div 2 -$ number $\div 2 = 5$
19. Number $+ 2 \times 3 + 18 \div 3 - 8 \div$ number $= 1$
20. Number $- 1 \times 8 + 12 \div 4 + 15 \div 2 -$ number $= 8$
21. Number $\times 10 - 8 \div 2 + 4 \div$ number $\times 8 + 2 = 42$
22. Number $\div 4 + 6 \times 8 - 34 \div 2 -$ number $+ 5 = 12$
23. Number $+ 5 \times 4 - 4 \div 8 + 1 \times 2 -$ number $+ 4 = 10$
24. Number $- 2 \times 6 + 20 \div 2 - 4 \div$ number $+ 5 = 8$
25. Number $\times 12 - 8 \div 4 + 5 \div 3 -$ number $\times 8 + 2 = 10$
26. Number $\div 3 + 4 \times 6 - 14 \div 2 -$ number $\times 6 \div 15 = 2$
27. Number $+ 5 \times 10 - 25 \div 5 - 5 \div$ number $+ 3 = 5$

SOME DEVICES IN ARITHMETIC

28. $\text{Number} - 3 \div 2 + 4 \times 4 - 10 \div \text{number} + 8 = 10$
29. $\text{Number} \times 9 - 6 \div 3 + 8 \times \frac{2}{3} - 4 \div \text{number} = 2$
30. $\text{Number} \div 3 + 4 \times 6 - 14 \times 2 - 20 \div \text{number} + 6 \div 2 \times 5 = 25$

WRITTEN

31. $\text{Number} \times 12 + 158 \div 2 - 46 \div 3 + 145 \div 2 - \text{number} = 78$
32. $\text{Number} + 135 \times 27 - 2,382 \div 3 + 578 \div 9 - \text{number} \div 3 + 3 = 40$
33. $\text{Number} - 23 \times 51 + 2,873 \div 17 - 1 \div 3 - \text{number} + 2 = 35$
34. $\text{Number} + 275 \times 24 - 3,144 \div 8 + 165 - 597 \div \text{number} = 3$
35. $\text{Number} - 47 \times 55 + 765 \div 5 + 364 \div \text{number} + 9 = 20$
36. $\text{Number} \div 4 + 316 \times 12 - 1,220 \times 15 - 38,580 \div \text{number} = 45$
37. $\text{Number} \times 75 - 345 \times \frac{8}{15} + 748 - 564 \div \text{number} = 40$
38. $\text{Number} - 49 \times 81 + 5,178 \div 3 - 403 \div \text{number} + 833 \div 43 = 20$
39. $\text{Number} \div 5 + 721 \times 35 - 18,228 \times 4 + 280 \div 28 - \text{number} = 1011$
40. $\text{Number} \times 64 - 8,072 \times \frac{5}{8} + 5,045 \div \text{number} = 40$
41. $\text{Number} - 79 \times 25 + 1,765 \times 4 + 40 \div 100 + 28 - \text{number} = 20$

PROBLEMS OF THE ELEMENTARY SCHOOL

42. $\text{Number} + 83 \div 5 + 781\frac{2}{3} \times 55 - 32,989 \div 11 - \text{number} = 991$
43. $\text{Number} \div 7 + 371 \times 91 - 7,735 \div 26 + 385 \times 2 - \text{number} = 2,772$
44. $\text{Number} \times 98 - 3,672 \div 2 + 723 \div 7 + 159 \div \text{number} \times 2 = 14$
45. $\text{Number} \times 36 + 1,728 \div 9 + 640 \times \frac{3}{4} - 357 \div 3 - \text{number} = 89$
46. $\text{Number} + 57 \times 72 - 2,448 \div 9 - 184 \div \text{number} = 8$
47. $\text{Number} \div 6 + 115 \times 33 - 3,740 \times 4 \div 22 - \text{number} = 10$
48. $\text{Number} - 3 \times 26 + 156 \div 13 + 128 \div 2 - \text{number} + 3 \times 4 = 280$
49. $\text{Number} + 701 \times 12 - 3,456 \times \frac{2}{3} - 1,480 \div 8 - \text{number} + 72 = 300$
50. $\text{Number} \div 6 + 372 \times 42 - 15,624 \div \text{number} = 7$

MULTIPLICATION DRILL CHART

The multiplication table, for all numbers from zero to twelve, involves 169 permutations or 91 combinations. For use in drill work these combinations may be written each upon a separate card, but in place of this, or to supplement this, a drill chart may be easily constructed.

This device consists of two discs, in appropriate frame, on each of which is written the set of numbers,

SOME DEVICES IN ARITHMETIC

zero to twelve. By revolving these discs any combination may be brought into view. This will be readily understood by a glance at this illustration, which shows the combination 10×7 in view.

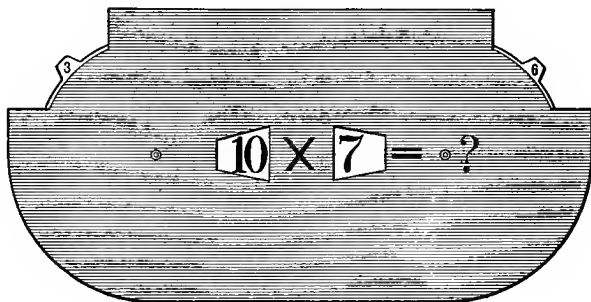


FIG. 1

A turn of either of the discs, made by pushing the cogs at the upper corners of the frame until they coincide with the edge of the frame, changes the combination. The other side of the chart is the same except that the plus sign is used, making the chart available for a certain amount of addition drill.

This chart may easily be made by using the following diagrams, drawn to scale, as patterns. Three pieces of cardboard, each 22" by 11", are required. From these, five parts are cut out, two according to pattern A, one according to pattern B, and two according to pattern C.

PROBLEMS OF THE ELEMENTARY SCHOOL

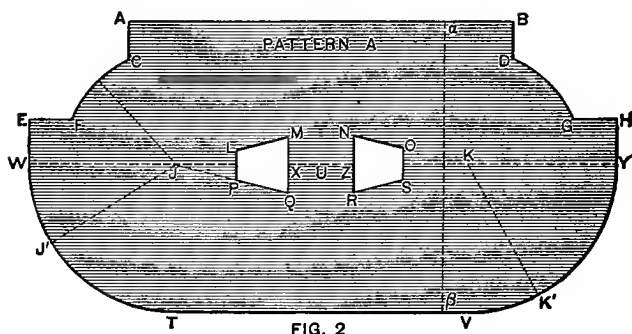


FIG. 2

$AB = CD = 14\frac{1}{2}"$ $WY = 22"$ $EF = GH = AC = BD = 1\frac{5}{8}"$
 $WJ = JU = UK = KY = KK' = JJ' = 5\frac{1}{2}"$
 $TV = JK = 11"$ $XU = UZ = 1\frac{5}{8}"$ $a\beta = 11"$
 $JM = JQ = NK = RK = 4\frac{1}{4}"$ $JP = JL = OK = SK = 2\frac{1}{4}"$

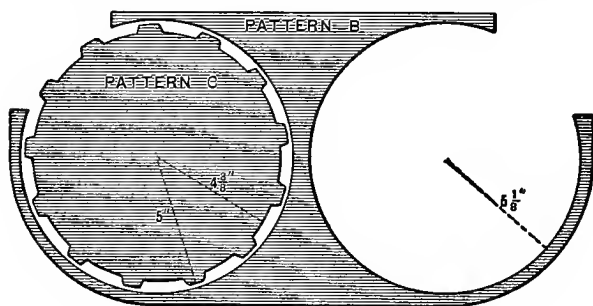


FIG. 3

Inasmuch as the disc (pattern C) is based on a circle divided into thirteenths, a difficult arc to mark off, the exact form and size of a part of the disc is here

SOME DEVICES IN ARITHMETIC

given, a tracing of which may be taken and applied around the circle.



FIG. 4

Between each of the two outside parts of the frame (pattern A) there are laid the two discs, on their appropriate centers, surrounded by the middle part (pattern B). A pin or paper fastener may be used as the center pivot on which the discs shall rotate. The three parts of the frame are either glued together or bound together by paper fasteners.

The drawing of the numbers on the discs, preferably in crayon, not in ink, should be done after the chart is put together, and care must be taken to see that each cog sets in its true position before the number is written upon the disc. On the reverse side of the disc the same number should be printed upon the particular cog which is in view when that number shows through the frame. In the illustration given, for instance, while one side shows 10×7 , it happens that the reverse side shows $3 + 6$, as is indicated by the figures on the cogs.

PROBLEMS OF THE ELEMENTARY SCHOOL

THE MENSURATION OF THE TRAPEZOID¹

A number of methods of demonstrating the formula for the area of the trapezoid are available. Two are given. The plain words **BASE** and **TOP** are used as names for the parallel sides.

(1) Cut out the trapezoid ABCD. Fold DC over on

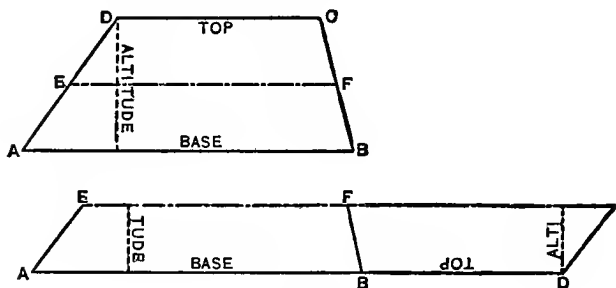


FIG. 1.

AB and cut along the fold. Replace the upper portion along the side of the lower, as in Fig. 1.

This gives a parallelogram, whose base is **BASE** + **TOP** and whose altitude is $\frac{1}{2}$ **ALTITUDE**. Hence the area of the parallelogram, which is that of the equivalent trapezoid, is:

$$(\text{BASE} + \text{TOP}) \times \frac{\text{ALTITUDE}}{2}$$

¹ This and the following section are reprinted from *School Work*, January, 1903.

SOME DEVICES IN ARITHMETIC

(2) Cut along the line DF and replace, forming a triangle, whose area, and hence that of the equivalent

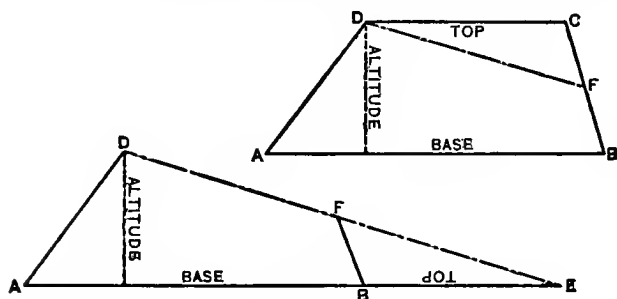


FIG. 2.

trapezoid (Fig. 2), is:

$$(\text{BASE} + \text{TOP}) \times \frac{\text{ALTITUDE}}{2}$$

Either of these two figures may be cut out of thin wood in two pieces hinged at F, making a model which forces clearly upon the mind of the pupil the equivalence of the original trapezoid and the resulting rectangle or triangle. The triangle method has the advantage of not disturbing the notion of the ALTITUDE, which remains the same in both trapezoid and triangle. The method of passing a line through F parallel to AD and fitting the resulting triangle on to the upper half presents the difficulty of the *average* between BASE and TOP.

PROBLEMS OF THE ELEMENTARY SCHOOL

LONGITUDE AND TIME

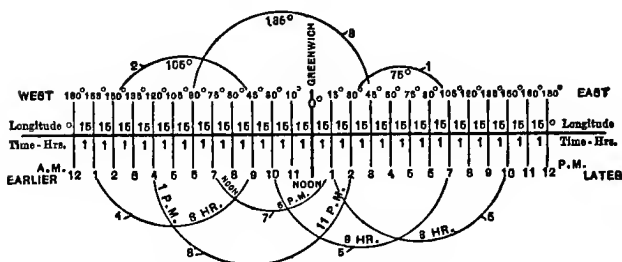
This subject is perhaps one of the most difficult to grasp of any of the grammar-grade topics. The following outlines an order of presentation which has been found to give good results: Using the globe, review latitude and longitude, meridians and prime meridians, the revolution of the earth, the direction of this revolution from west to east, the consequent "rising" of the sun in the east, and the apparent motion of the sun from east to west. The first appearance of the sun at any place is called "sunrise" for that place. As the sun travels westward, easterly places have sunrise *before* westerly places. Hence, when it is sunrise at a westerly point, it is *after* sunrise at an easterly point. Similarly develop: When it is *sunset* at a westerly point, it is *after* or *later than* sunset at an easterly point; when the sun is directly overhead, or on the meridian of, a westerly point, it is *past* the meridian of an easterly point, i. e., when it is *noon* at a westerly point, it is *after noon* at an easterly point; when it is 4 P.M. at any point, it is *after* 4 P.M. at any point east of it; when it is 7 A.M. at any point, it is *after* or *later than* 7 A.M. at any *easterly* point; when it is 5 P.M. at any point, it is *earlier than* 5 P.M. at any *westerly* point; and finally, at any given moment *easterly* places have *later* time and *westerly* places have

SOME DEVICES IN ARITHMETIC

earlier time. This fact of difference of time and of earlier and later time, dependent upon longitude, having been established (and this point might well mark the end of the first lesson), it remains to consider the exact relation between the difference of time and the difference of longitude.

From noon to noon for any given place, the sun has traveled 360° of longitude, but from noon to noon for any given place is a cycle of twenty-four hours of time. Hence the *rate* of the sun's traveling is 360° in twenty-four hours, or 15° in one hour.

On the blackboard build up this diagram:



Use this diagram as the basis of a large number and variety of oral questions. The solutions should be indicated by colored chalks to separate the different questions. The diagram as here shown indicates that the following questions have been asked:

PROBLEMS OF THE ELEMENTARY SCHOOL

(1) What is the difference in longitude between points 30° E. and 105° E.?

(2) What is the difference in longitude between points 150° W. and 45° W.?

(3) What is the difference in longitude between points 45° E. and 90° W.?

(Let the pupils suggest questions of the above nature.)

(4) What is the difference in time between points 45° W. and 165° W.?

(5) What is the difference in time between points 15° E. and 150° E.?

(6) What is the difference in time between points 30° W. and 105° E.?

(Let pupils suggest questions of the above nature.)

(7) When it is noon at 75° W., what time is it at 15° E.?

(8) When it is 11 P.M. at 30° E., what time is at 120° W.?

At an early stage appeal to the geographical interest by using as a table of longitudes:

Approximately, *for oral work*:

0° .	London.
15° E.	Berlin ($13^{\circ} 24'$), Vienna ($16^{\circ} 23'$).
30° E.	St. Petersburg ($30^{\circ} 19'$), Constantinople ($28^{\circ} 59'$).
45° E.	Aden ($44^{\circ} 59'$).

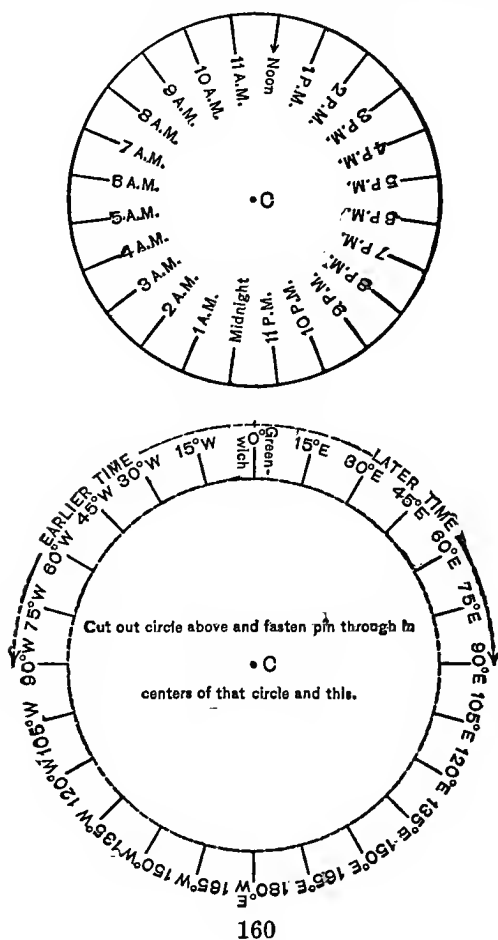
SOME DEVICES IN ARITHMETIC

60° E.	Mauritius (57° 30').
75° E.	Bombay (72° 49').
90° E.	Calcutta (88° 23').
105° E.	Singapore (103° 51').
120° E.	Manila (120° 58').
135° E.	Vladivostock (131° 53'), Yokohama (139° 36').
150° E.	Sydney (151° 13').
15° W.	Freetown (13° 10').
30° W.	Azores Islands (25° to 31°).
45° W.	Rio Janeiro (43° 8').
60° W.	Buenos Ayres (58° 22'), Martinique (61° 10').
75° W.	New York (74° 0').
90° W.	St. Louis (90° 15').
105° W.	Denver (105°).
120° W.	Carson City (119° 46'), San Francisco (122° 25').
135° W.	Sitka (135° 20').
150° W.	Honolulu (157° 52').

Many questions of this kind should be given as "oral" arithmetic until the picture of the relation of longitude to time is well fixed in the pupil's mind and the process begins to be automatic. Then proceed with "written" arithmetic questions involving minutes and seconds. Into the hands of any pupil who

PROBLEMS OF THE ELEMENTARY SCHOOL

fails to grasp the subject put a model, made of bristol-board or wood, according to the following pattern:



VII

THE USE OF THE BLACKBOARD

UP to a few years ago any essay concerning the school blackboard could refer only to a narrow panel of inferior slate or painted wood or perhaps a single easel of slated surface. To-day the graded school is everywhere equipped with a comparatively large amount of blackboard space, and every effort is made by progressive superintendents of school buildings to insist upon a quality of surface which shall contribute most satisfactorily to the work of the school.

In the meantime the blackboard has become one of the recognized implements in the teacher's tool chest, and the use of the blackboard has become one of the most important features in the technique of teaching. It is unfortunately true that many a teacher falls short of realizing the full value of the blackboard as an essential element in the teaching process. I recently visited one teacher, for instance, who had covered her blackboard for a space of eight running feet with a denham background upon which were hung samples of

PROBLEMS OF THE ELEMENTARY SCHOOL

pupil's written work, the while certain spaces of bare wall remained undecorated. It is not that such a teacher would surrender the blackboard altogether or that such a teacher does not make a certain profitable use of the board, but rather that she fails amply to comprehend its tremendous pedagogic value.

There are many teachers who give little attention to the psychology of sense-impression. This is true even in the appeal to the sense of hearing. "Use of voice" means to the average teacher only that he shall not raise his voice, shall not rant, in short, shall not develop what is popularly known as the "school-teacher's voice." It does not occur to him deliberately to train his voice and perfect his control of it for pedagogic purposes. He may recognize the necessity of mastering the "five formal steps" in presentation, but not that of mastering his voice, the chief instrument through which he presents the "steps" whether formal or informal.

Mere sympathy for the child who must listen to the same voice for the greater part of the school day should impel every teacher so to train his voice that it shall be relieved as far as possible of monotony. He should practice variety of modulation out of mere pity for his auditors, if for nothing more. Every adult recalls some hour-long lecture to which he has been subjected with nothing left of recollection but a sense

THE USE OF THE BLACKBOARD

of pain, due to the speaker's failure to use his voice to advantage.

But variation in voice, necessary as it is, is not all that is demanded of the teacher. The professional teacher will study the individual qualities of his own voice, and so master its tone and timbre that he can make it do his will. As he wills, in turn, to command, to reprimand, to soothe, to stimulate, to attract, to distract, his voice does his bidding and his pupils are controlled at a minimum of strain. Not only this, but teaching is an art and shares with other arts the dictum that the best art conceals art. Just as the painting must not betray the painter's struggle to master the mechanics of his art, just as the poem must bear no trace of the poet's efforts to acquire the technique of verbal construction, just as the violinist swaying his audience by the overpowering beauty of his performance must inject no hint of the years of toil spent in formal exercises, so in the teacher's art there must intrude no indication of the strain of preparation.

The wise teacher realizes that in that part of his work which consists in "impression" of his pupils, he is guilty of waste when he continues to impress them through the single sense of hearing. The skillful teacher instinctively teaches "chalk in hand," and loses no legitimate opportunity to supplement his

PROBLEMS OF THE ELEMENTARY SCHOOL

appeal to the pupils' hearing with a contemporaneous appeal to their sense of sight. We appreciate the popularity of that form of entertainment known as a "chalk talk" wherein a lecturer sketches a picture while he maintains a running monologue on the subject of the picture and things in general. The teacher is not, of course, to aim to become a vaudeville artist, but it is certainly not out of place for him to learn from such a performer whatever he may of the psychology of attention.

The children, while listening to the teacher, are bound to look at something. If the ear alone is to be appealed to, why not require the pupils to close their eyes while listening. Concentration of attention implies the exclusion of contrary attractions. The full beauty of a symphony is best to be sensed by closing the eyes and surrendering the whole field of attention to the sense of hearing. Every sensation of touch, or taste, or smell, unless it might happen to illustrate the theme of the music, is a distinct distraction, and should be avoided if possible. So in the classroom, if the teacher's appeal to the pupils' attention is to be made solely through the gateway of the ear, all other gateways should be barred and bolted. But if the attention, instead of being distracted, can, on the contrary, be augmented through the play of the other senses, then good pedagogy demands that those other

THE USE OF THE BLACKBOARD

senses should be used, and used freely and intelligently.

The sense which, in the classroom, is the most valuable as supplementing that of hearing is of course that of sight. The whole personality of the teacher forms a sight impression which may make or mar a lesson. His attitude, his posture, his gestures, his facial animation—all are elements which contribute toward attracting, distracting, or repelling the class. That is, the teacher's personal presence may attract attention directly to the subject, reinforcing it and welding its materials; or it may distract attention from the subject-matter to the speaker himself and his idiosyncrasies; or it may repel attention, through its very colorlessness, from both the subject-matter and the teacher. He will therefore study to make his personality a positive force contributing to his pedagogic method and not subtracting from it or negating it.

With chalk in hand, the teacher is doubly armed in his assault upon the citadel of attention. For example, each verbal stroke of emphasis has its accompaniment in the written stroke. The strange word to which the tongue can give but a partial introduction, is simultaneously written on the blackboard, not as a stilted exercise, but as a natural incident causing no appreciable extra expenditure of time.

PROBLEMS OF THE ELEMENTARY SCHOOL

Above all, no formal recognition is to be made of this extra appeal to attention. The teacher will not say, "this is the way that word is spelled," "be sure you learn how to spell this word," or any equivalent of "watch me while I write this word." This would be as inartistic as for him to say, "did you notice that when I spoke the word 'flit,' I gesticulated thus?" There is, too, an incidental gain that is not to be undervalued. The use of the blackboard in this and similar ways is one more evidence of the teacher's aliveness to his subject. Interest begets interest. Enthusiasm is contagious. The listless teacher cannot condemn his class for inattention. The intelligently alert teacher cannot help carrying his class with him, and the use of the blackboard is one of the tangible evidences of his alertness.

If all this holds good for the impression which the teacher aims to make upon a class, it is equally valid when it is the pupil and not the teacher who is talking. The teacher's use of the blackboard must be patently free and unrestrained, and the pupils should be trained toward a like freedom and facility. It will not come except by patient effort and encouragement, but it can be gained to a varying degree by every pupil. We are only just beginning to make reasonable use of the social value of the class. The recitation is no longer addressed solely to the teacher, but also to

THE USE OF THE BLACKBOARD

the class or the individual interlocutor in the class. The pupil must be led to feel that the nearest panel of blackboard is his whenever he needs it to illustrate a point in his recitation, and he should be trained to turn to it instinctively whenever he can use it to advantage.

We are fast learning that all impression and no expression makes Jack a dull boy, and yet for many reasons teachers find it difficult to yield the floor to the pupils. For one reason, the tradition is a strong one that defines a recitation as the stating of a direct question by the teacher and its answer by the pupils. For another, under the pressure of the time schedule, the teacher feels hurried and believes that valuable time is lost when the class does much of the talking. So we find many teachers doing for the pupils what they should be doing for themselves.

As one goes through the classrooms of a school, he is rightly suspicious of a teacher's method if he invariably finds the blackboard immaculately clean or barren of pupils' work. It would seem a fair test to ask how many pupils of a class at the close of a day have not done some work at the blackboard, and the proportion of such pupils ought to be very small. In much of the class work it is economy for some one to act as secretary for the class and carry on at the board the exercise which belongs to the class as a whole. It

PROBLEMS OF THE ELEMENTARY SCHOOL

is also true that the teacher is best qualified to act as secretary, but it may often be questioned whether it is wise for him to do so. The little longer which it takes for the pupil to do the same work is probably repaid in gain to the particular pupil and in class interest.

The use which the teacher will make of the black-board will vary somewhat with the grade of the class. The lower the grade the greater the necessity for the teacher's exercising great care in her board writing. The teacher's work is always a model to the pupils, but most so in the lowest grades.

It may be a question to be settled on its own merits as to whether words should ever be printed on the board, but it is certain that, if so, they should be properly printed. It is not uncommon to find such examples of lettering as:

N h n T i K k

Instead of letters indiscriminately embellished with curlycues such as these, a simple font should be used, one which is consistently free from extra and meaningless marks. It is true that book print uses a font of type in which there is shading and elaborate complexity of line, but it is impossible for the teacher to copy this and so he should frankly not attempt to. For

THE USE OF THE BLACKBOARD

instance the letter h. No teacher could in less than five minutes make a letter on the board which would faithfully reproduce this form: **h**; she can however easily make the form *h* her model and sketch quite rapidly such a font as :

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

In the lower grades a certain amount of blackboard decoration is permissible, provided that it is really decorative and not grotesque; but it must be kept in mind that decoration is the least profitable use to which the board can be put. Allied to this is the use of the board for lists of names of merit with stars or flags to indicate degrees of excellence, all of which may be more or less legitimately effective in the middle grades, but which should disappear, as less artificial incentives operate to control pupils.

Few permanent entries should be made on the board. Certain records, the day's register and attendance of pupils, for instance, may be kept there, but the largest possible space should be reserved for everyday use. Tables or tabular forms may be reserved for a few days at a time, such as an outline for geographical study, thus:

PROBLEMS OF THE ELEMENTARY SCHOOL

TOPICAL STUDY OF A COUNTRY.

- | | | |
|-------------------|--------------|----------------|
| 1. Location | 4. Surface | 8. Commerce |
| 2. Size and shape | 5. Drainage | 9. Cities |
| 3. Coast line | 6. Climate | 10. Government |
| | 7. Resources | |

The chief advantage of using the blackboard for this is that as fast as the pupils become adept in its use in part, that part may be erased until the outline eventually disappears. But if it is to be kept intact for any length of time, it would be better to print it on paper in chart form and thus release the board space for other purposes.

One of the pedagogic means commonly neglected is the use of colored chalk. In advocating its liberal use I would not be understood as recommending its display merely that there may be a touch of color on the board. To write one sentence in red, the next in white, and the next in blue, would be inane. But just as the skillful teacher uses the blackboard with a definite purpose, knowing exactly what part in his art of teaching each stroke contributes, so will he deliberately and purposefully substitute some color for white wherever his method will gain thereby. Much of the time of the teacher is spent in developing in his pupils the power of voluntary attention, and yet there is frequent opportunity for the legitimate

THE USE OF THE BLACKBOARD

use of involuntary attention. In the course of a presentation lesson, when it would be a distinct loss to interrupt the trend of thought to secure volitional attention from the wavering few who are found in every class, a stroke of color may very often be made the means of compelling attention.¹ By way of illustration:

1. There is an appropriateness in the use of certain colors for specific illustrations. For instance, the month's calendar may be drawn on the board, with spaces reserved for a daily entry as to the weather. It is appropriate that sunshine should be expressed by a yellow sun, and rain by a colored, rather than a white, umbrella.

2. Emphasis that is made in speech by accent may be made in board writing by colored words or underlining. For instance,

*Washington was inaugurated first President
of the United States in 1789,*

makes a more successful appeal than

*Washington was inaugurated first President
of the United States in 1789,*

and *separate* is better than *separate*.

¹ Yellow, orange, pink, light green, light blue are most satisfactory; dark tones of red, green, blue, etc., are less so.

PROBLEMS OF THE ELEMENTARY SCHOOL

3. The distinction between a law and its application may profitably be made by variety of color.

$$\frac{\text{Base} \times \text{Altitude}}{2} = \text{Area } \triangle$$

may represent the formula, and the application is then made directly, thus:

$$\frac{\text{Base} \times \text{Altitude}}{2} = \text{Area } \triangle$$

4. Similarly as to the distinction between original work and corrections, as in composition or any subject where there can be a variety of opinion as to correct form. John may write a sentence as he thinks it should be. James makes his alterations in red. Harry follows and amends in green, and so on, and confusion as to authorship is avoided.

5. Similarly as to the distinction between work and its illustration. This is frequently necessary in mathematical operations. For example, when first-year

THE USE OF THE BLACKBOARD

pupils are learning the simplest combinations, the child writes,

$$1 + 4 = 5$$

He is having some difficulty with both the content and the form. In aiding him as to content, the teacher must be careful not to puzzle him as to form. She may aim to help him by writing above the figures, thus:

$$\begin{array}{ccccccc} o & & o & o & o & o & \\ 1 & + & 4 & = & 5 \end{array}$$

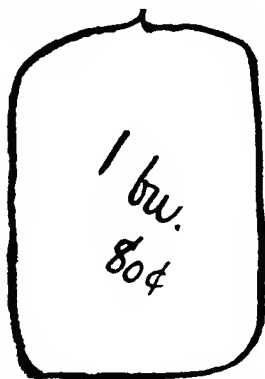
Now she may call these circles oranges, and she may easily think of them as oranges; yet there is danger that the child will see in them something too much like the zeros to which he is also being introduced. The use of orange-colored chalk for the oranges eliminates this danger. The same criticism would not apply to the sketching in white of characteristic forms which could not be confused with numbers, as *o o o o o* for apples, or *p p p p p* for flags, or *o o o o o* for cherries, or *h h h h h* for chairs, etc., and yet even these might profitably be done in appropriate color—it would certainly take no longer to do so, and there are then distinct impressions made by the numerical symbols and by the illustrative pictures.

PROBLEMS OF THE ELEMENTARY SCHOOL

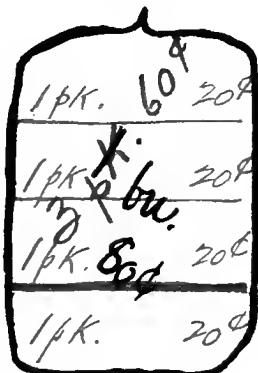
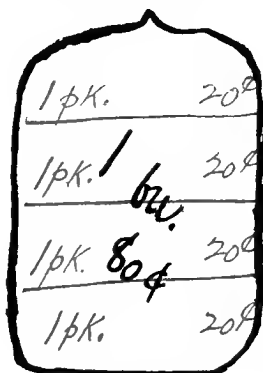
Another instance:

If one bushel of potatoes costs 80 cents what will 3 pecks cost?

Here is the bushel bag of potatoes

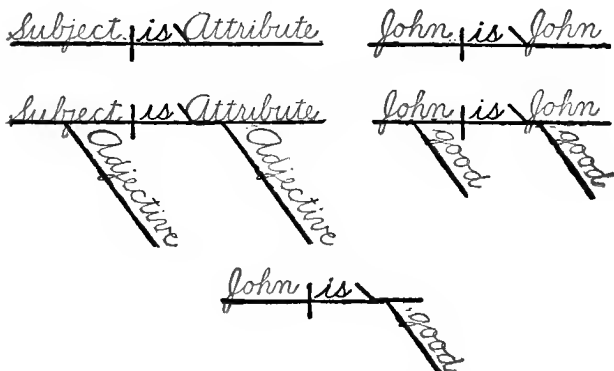


and here is the thought of the problem applied to this bag of potatoes.

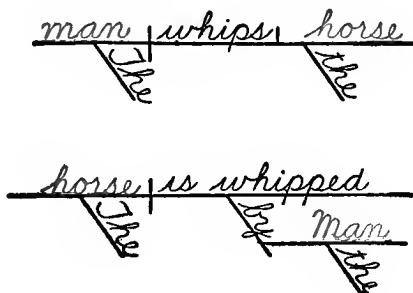


THE USE OF THE BLACKBOARD

6. Identities and relationships are well brought out by the use of color. For example, in diagramming in grammar, to locate modifiers, etc.:

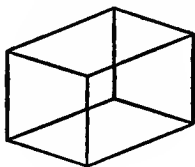


and to follow the effect of the changing of the voice of a verb from active to passive.

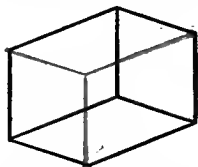
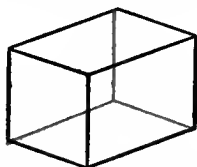


PROBLEMS OF THE ELEMENTARY SCHOOL

7. Unseen lines in an illustration may best be indicated in color. For instance, this figure



may represent a rectangular prism in either of two positions, but the ambiguity is eliminated thus:



The illustrations which have been given are necessarily but few, and are merely suggestive, but they hint at the constant employment which may be made of the simple expedient of color. Not alone the pen is mighty; a fragment of chalk in the hand of a skillful teacher may illumine the mind of the pupil as can nothing else.

VIII

THE SCHOOL MUSEUM

EVERY alert teacher appreciates the value of objective illustration as a factor in teaching method, and in consequence will gradually accumulate such material as experience proves appropriate to the work at hand.¹ The principle of coöperation yields as marked a beneficial return when applied to the establishment of this sort of equipment as it does in any other department of school management.

¹ "In France, one finds a *musée scolaire*, or school museum, in almost every school, and this is often of great assistance in the object lessons. The teacher encourages the children to bring here things that have any unusual interest, and they often take great pride in their botanical or natural-history collection, necessarily small, but none the less valuable from an educational point of view."

—Frederic Ernest Farrington: "The Public Primary School System of France," Teachers College, Columbia University, 1906, p. 88.

I am glad to acknowledge the source of my own inspiration along this line, namely, the Sixth Burgher School, in Leipzig, which Dr. Klemm, in his "European Schools" (p. 282), calls "the best equipped in the world."

PROBLEMS OF THE ELEMENTARY SCHOOL

When a school museum is established upon this basis it is clear that its aim should be to provide such material as will be of practical use to the teachers in their daily work. The display idea should be eliminated; the museum should be regarded as a depository of material rather than a collection for exhibit. Otherwise the museum is likely to degenerate into a mere showroom, quite meaningless and of little practical value.

My own experiment with the school museum has convinced me that the time devoted to it has been eminently worth while. I began ten years since by donating a number of specimens of my own gathering. The collection aggregated about six shelffuls in an ordinary cabinet in the principal's office. To-day the museum occupies one hundred thirty shelves in a room seventeen by twenty-five feet devoted exclusively to this purpose. The growth has been gradual and unforced. The teachers of the school have supported a museum fund by contributing ten cents each per month. This contribution represents less than the amount which each teacher would probably expend on illustrative material if there were no coöperative scheme. This fund is drawn upon to meet all expenses of the museum, which are of three kinds: cataloguing, preparing specimens, and purchasing material.

Our catalogue, of which four editions, with inter-

THE SCHOOL MUSEUM

mediate supplements, have been issued in ten years, consists in the present edition of twenty-four pages, and costs us about twenty dollars for three hundred copies. We are also under expense for mailing a small number of catalogues to school authorities and others interested in the work and to people whose interest might result in their donating specimens. These catalogues are accompanied by an explanatory statement as follows:

This little catalogue is sent in the hope that it may interest you in our School Museum. We desire to emphasize the fact that the teachers make daily use of the collections, reënforcing, by illustration, their work in nature, reading, geography, history, etc. Many departments are as yet unrepresented. Material of any kind would be acceptable—perhaps you will help us.

The preparation of specimens takes various forms. We receive birds and other small animals which have just been killed, and these we send to the taxidermist for mounting. We receive second-hand specimens which require a little repairing. Our specimens in alcohol and in camphor require a renewal of the preservative periodically. A random selection from our records shows that we have paid the following prices for mounting: 25 cents for a mouse; 50 cents each for a woodlark, a canary, a parrot, a humming bird; 75 cents each for a robin, a kingfisher, a bluebird; \$1.25

PROBLEMS OF THE ELEMENTARY SCHOOL

each for a squirrel and a woodpecker; \$1.50 for a frog; \$3 for an owl; \$5 for a hawk. Material purchased consists of mounted specimens, pictures, models, etc., and raw material for the construction of models. For example, a gallon box, made of zinc, three by seven by eleven inches, cost 75 cents; a hen, mounted, \$5; a piece of kangaroo skin, 25 cents; bottles for specimens average 20 cents per dozen; silk flags of various nations, eight by twelve inches, cost \$2.80 per dozen.

A few other items in our collection are here noted as typical of what it is aimed to provide. For elementary school purposes, classification of nature specimens must not be carried out to any extended detail. The aim must be the modest one of teaching the pupil to distinguish, for instance, between a sparrow and a swallow, a butterfly and a moth, an elm and a pine; energy must not be wasted in illustrating such distinctions as *papilio zolicaon* and *papilio daunus*. Among our mounted specimens are: bat, flying squirrel, ducks, hen, orioles, fox. There are also birds' nests and birds' eggs. Where it has been impossible to procure specimens of animals, pictures, many in color, are provided. Among the objects preserved in alcohol we have snakes, fishes, etc., and a series of "from tadpole to frog." A few skins or pieces of leather—snakes, bear, elephant—and a few skeletons—horse's skull, teeth, etc.—are included. Sea products are well rep-

THE SCHOOL MUSEUM

resented in shells, corals, urchins, starfish, and the like; agricultural products by a particularly fine series of grains in the seed—about one hundred varieties; and mineral products by several hundred specimens. Trees are represented by pictures, by cross-sections of trunk and branches, by bark, and by lumber in various degrees of finish. Insects are mounted each in a separate box. Series illustrating the evolution of industrial and manufactured products are particularly valuable. We have coal in its various commercial sizes, silk from the cocoon to the ribbon, cotton from the seed to the spool, etc. There is a small ethnographic section of miscellaneous specimens such as tools and coins.

In addition to purchase, material comes to us in many ways. The public museum has given us several of its duplicate specimens and material which, though not quite up to their standard, is yet sufficiently good for our purpose. Teachers, pupils, and others make frequent contributions. As one illustration, a stranger, passing the school building one holiday, got into conversation with the janitor, by virtue of which he was invited to visit our museum room. He accepted the invitation, and soon after sent us our mounted fox. We find it advisable to make it a rule not to accept specimens as loans; they must be given to us outright or not at all. This is chiefly desirable

PROBLEMS OF THE ELEMENTARY SCHOOL

because of the responsibility which would accrue for the care of loaned articles.

The arrangement of material is on shelves which are numbered on a flexible basis:

1-120	Animal
121-240	Vegetable
241-300	Mineral
301-350	Miscellaneous

Thus if expansion makes it necessary, the number of a shelf may be changed, but the specimen follows the number. The catalogue shows names of specimens with the shelf number at the end of the line. A section reads:

Azurite.....	255
Barley, flour, grits.....	127
Barnacles.....	61
Bartholdi statue, model of.....	303
Basswood (T 16) 167.....	161
Bat, m.....	91
Beans, various kinds of.....	129
Bear (A 15) 105, (A 47, 49).....	107
Bear hide, piece of.....	99
Beaver, stick gnawed by.....	91
Beech (T 1) 167.....	159
Bell, City Hall, portion of.....	319
Bees, m.....	39
Beetles, m.....	35
Beet sugar.....	219

THE SCHOOL MUSEUM

Abbreviations used are: a=preserved in alcohol; m=mounted; A=series of pictures of animals; B=of birds; T=of trees; F=of flowers.

Each teacher is provided with a catalogue and is expected to make constant use of the museum for illustrating his work, not only in nature study, but also in reading, history, geography—in fact, in all subjects which permit of objective illustration.

It is necessary that some one be placed in position of responsible supervision of the museum. A teacher sufficiently interested to undertake the work can usually be found and should then be excused from other assignments of work outside the classroom. The duties of the curator are to act as treasurer of the museum fund, to accept and prepare specimens, and to care for the museum room. Pupils are always available who will enjoy helping the curator. Teachers may be directed either “When returning specimens be sure to place them on the proper shelf—if in doubt look up the shelf number in the catalogue” or “. . . place them upon the table and do *not* replace them in their shelf positions.” If the latter rule is made, some one must be assigned to replace the returned specimens daily.

We have found it profitable to have boxes constructed, approximately a foot in each dimension, with the front and sides of glass. These are located on

PROBLEMS OF THE ELEMENTARY SCHOOL

the walls at convenient places in the corridors and a specimen from the museum is placed in each. These specimens are changed from time to time, and if they are appropriate to the season, so much the better. For instance, a robin may be accompanied by a placard: "Robins were seen in the park yesterday, March 18th. Have you seen any this year?"

Whether pupils should be permitted to visit the museum or not is an open question. As a reward, or from some other motive, a class with its teacher might very occasionally be given a period devoted to inspection of specimens in their cases. On the other hand, if the pupils are debarred from the room and the museum is regarded as a storehouse and not as an exhibit, their interest in specimens when they are used in the classroom in the course of the regular work is apt to be heightened.

IX

THE ALUMNI

THE full value of alumni organization is universally acknowledged and appreciated in respect to any educational institution of collegiate or university rank. But it is sometimes overlooked that even to the public elementary school, alumni interest is equally valuable though its expression may take somewhat different direction. Thus, aside from an occasional contribution of pictures or other supplementary equipment, the financial support which is directly rendered with telling effect by the alumni of many private higher institutions, is not a practicable consideration in the immediate relation of the public-school graduates to their alma mater.

There is for the public school, however, an indirect alumni influence bearing upon financial support, that merits attention. Any municipal system of schools is dependent upon the taxpayers for maintenance, and this support in turn depends upon the degree of favorable estimation to which the schools are regarded by the great citizen body. If the graduates from the

PROBLEMS OF THE ELEMENTARY SCHOOL

public schools of any city are imbued with a spirit of loyalty and devotion, each to his own alma mater, their collective support of the entire system when they in turn become taxpayers and voters, will be wholehearted and correspondingly effective, and will react favorably upon the succeeding generation of pupils. Contrariwise, the boys who sustain for their individual schools a sentiment of indifference or distaste are likely to become the men whose regard for the school system is flaccid or perhaps positively inimical. Upon this broad consideration it is clear that there is wisdom in developing an alumni spirit in and for a school.

There is a more specific value in alumni support. That school which establishes favorable traditions has an asset of immeasurable worth. Any school acquires a tradition of some sort—it cannot hope to escape—and hence it behooves the responsible head of the school to assure to it the best quality of traditional spirit and to protect it against the baneful effects of an unfavorable tradition. If the pupils of a school are permitted to feel that once they are graduated they are cast adrift and that the interest of the school in them automatically ceases, their own interest in the school is unlikely to endure. On the other hand, assuming that the school has exercised an inspiring influence upon its pupils, that influence and its reaction

THE ALUMNI

for good upon the school may readily be extended into the postgraduate years.

As a single concrete example, consider the principal's handling of discipline cases. Henry Smith, let us say, is reported to him by his teacher for misbehavior. Discussing the matter with the boy, he says: "George Smith is your brother, is he not? And he was graduated from this school. What would they think of this sort of conduct at home?" However effective may be his respect for his father and mother, Henry has a wholesome regard for his older brother's good opinion. If George is an inspired alumnus of the school—even though in his time he may have had his own disciplinary troubles—Henry immediately recognizes that he has done something which George will not countenance. George, as Henry knows, is with the school, and that definite and positive support may be made a controlling factor in the disposition of the case. By contrast, if George is a negative alumnus of the school, Henry may well suspect that he is indifferent to his brother's shortcomings—might indeed applaud his misdemeanors—and the case is correspondingly more difficult to settle.

In turn, how far may school interest extend to the alumni? Ought graduation to close the personal account of the pupils with the school? I do not here discuss the place of the alumni association and kindred

PROBLEMS OF THE ELEMENTARY SCHOOL

forms for the promotion of alumni interest, but restrict myself to the consideration of the more personal duty of the principal of the school. Should not the interest of the school extend to the individual welfare of its alumni and exert an inspiring influence in their lives? In the typical city school, with its graduates numbering hundreds, the problem of thus reaching the individual graduate assumes serious proportions and if a principal is to extend his influence in this direction he must set about it deliberately and work systematically. His hit-or-miss efforts will undoubtedly yield some return, but one meager in comparison with that resulting from an expenditure of an equivalent amount of time and energy in pursuance of a carefully formulated plan.

My own effort to solve this problem, though limited in its results when compared with ideal aims, has yielded much in both sentimental return and practical usefulness. I believe that it is better that my interest in a graduate's welfare should find definite expression periodically though occasionally, than at such random that he may or may not receive my attention according to quite adventitious circumstances. Hence it is that each of my alumni (over a thousand in number) receives from me a personal letter or greeting on each of four consecutive birthdays, beginning with the first after his graduation.

THE ALUMNI

On the first occasion I write him a note more or less in accordance with the following form:

DEAR JOHN:

If I am not mistaken, to-day is your birthday, and I congratulate you upon the occasion. I hope you still think of "Eighty-Five" and are bringing credit to the school in your present career. I should be very glad to receive a letter from you telling me what you are doing, how you are getting on, and your plans for the future.

Cordially yours,
(Signed).

John receives this by mail and recognizes it as a birthday present of the kind for which we all have a growing regard as we learn to value our gifts by other than a dollars-and-cents measure. The expression of my personal and official interest is to him unexpected and pleasing. But better than this, it is frequently effective as a stimulus to profitable introspection. It may be that John has settled into a life of more or less perfunctory service in a shop or office and his interest in his work is at a standstill. The fact that I have an interest in that work which I am willing to turn out of my appointed way to express, is quite apt to heighten his own respect not only for his work but for himself. And then that word *plans* usually holds him. Either he is dreaming dreams and is grateful

PROBLEMS OF THE ELEMENTARY SCHOOL

for the opportunity to interpret them to a sympathetic listener, or perhaps he may not have realized that a fifteen-year-old boy may treasure plans among his heart's possessions.

The following excerpts from replies which I have received serve as types of how "John" views my interest in him—and not neglecting the girls, for they are not forgotten.¹ Many of these letters are so confidential, and they all mean so much to me personally that I should hesitate to publish them, even *incognito*, were it not that I am insistent upon proving my thesis that the time spent upon this correspondence is very much worth while:

"Your very kind note, extending birthday greetings, was a great pleasure to me, as well as to my parents."

"Your kind letter was received yesterday and I was very much pleased to hear from you. Accept my sincerest thanks for your congratulations. Am also pleased to know that I am still remembered in 'Eighty-Five' and very often think of it. . . ."

"Now, you really cannot imagine how very much pleased I was to find that you remembered me and

¹ All the excerpts here given are verbatim quotations from actual letters and, though small in number, have been selected with the view of showing types by which the general tenor of the responses may be estimated.

THE ALUMNI

my birthday, and I hope I'll prove worthy of your remembrance."

"I hardly think I can forget the good times I have had in dear old 'Eighty-Five,' or the kind instructions from those in it. I went to business directly after graduating . . . I am at present in the employ of —, from which I am obtaining plenty of business experience."

"I think very often of 'Eighty-Five' and would not mind having my school days over again. . . . I work in the ribbon department of —. Like many other boys, I find that promotion does not come as I would like, but by a little grit I hope to get advanced and eventually become a salesman."

"I often think of the school where I received the best part of my education. . . . I am at present employed in a good mercantile house. . . . My progress has been quite good for the time I have been in the concern, and, picking up points now and then as I have been doing, I think I shall some day become a traveling salesman, which is my only plan at present."

"I secured the position in —. Next year I intend to go to — at night. My intentions are to be a mechanical and electrical engineer. . . . Thanking you for your most timely remembrance."

PROBLEMS OF THE ELEMENTARY SCHOOL

On the next birthday, I jot down and send a mere memorandum, such as:

December 8, 1892

June, 1907

December 8, 1908

Congratulations!

(Signed)

The first date is that of John's birth; the second, of his graduation; and the third, the current date. This note serves as a birthday greeting and as a reminder of the first, and usually elicits a reply. Some of these replies have been:

"Since your last letter I have graduated from the — High School, and am now in the — Bank, where I am starting at the bottom of the ladder to learn the banking business thoroughly. I shall be pleased to write you how I am progressing in my work."

"After receiving your letter on my previous birthday, I hardly expected to be remembered this year, and it was a very agreeable surprise, I assure you, to receive your kind remembrance."

"I have received your congratulations and thank you heartily for the same. School life has not ended as yet, for I am now studying at —, and I hope to

THE ALUMNI

be an illustrator some day. My health has not failed, as I now weigh one hundred and forty-five pounds, this being forty pounds more than when I graduated."

"Thank you very much for that kind reminder of my debt to 'Eighty-Five.'"

"I assure you I have not forgotten it by any means, yet I am glad to have it recalled so vividly to my mind."

On the third occasion I send a copy of the school song with my autograph and the date, and receive such responses as:

"I thank you very much for the little card you sent me as it made me wish that I were back in school again and also glad that after being out of school for three years I am not forgotten. Those words 'When school is o'er may we be true yet more and more,' made me feel as though I could do anything for the school.

". . . So I made up my mind right there and then that I was going to do something this year; that when I give an account of my doings to you on my next birthday there will be at least one thing among them that you will approve."

On the fourth I write after this fashion:

Another birthday is here, and once again I send you my sincere congratulations. This time I have to confess that I am like "the old woman who lived in the

PROBLEMS OF THE ELEMENTARY SCHOOL

shoe." I find that it is impossible for me to keep up writing to all my children, and so I am asking you to accept with this letter my best wishes for all your birthdays to come. Next year, and every other year, too, when your birthday arrives, please write *me* a letter telling of your progress during the year, remembering that I have you on my mind and am always interested in your welfare.

Cordially yours,
(Signed)

This usually receives attention even if there has been a lapse in replying to the previous notes. I have had such responses as:

"It is indeed kind of you to think of me on my eighteenth birthday, and I want you to accept my thanks. I should say you were like the woman who lived in a shoe and I don't see how you could think of us as often as you did,¹ but never mind, we won't forget you nor '85, at least I won't as long as I live."

". . . it must keep you very busy remembering them all. But I am afraid I don't like the idea of not hearing from you any more. I have appreciated your letters so much and wish you would find time to write to me again."

"Your very kind and encouraging letter of the third instant received and I must thank you for your wishes

¹ I have never thought it necessary to explain to this graduate, nor to others, my "system," which makes the result possible.

THE ALUMNI

for my welfare. Words cannot express my gratitude for this letter and for the many others of the past. I will certainly accede to your wishes and advise you from time to time of my advancement."

"I thank you very much for your kind letter. I recognized the writing immediately and even before opening the letter, I wondered how many children you had graduated. So I was not surprised to read that they were getting too numerous. . . ."

"Of course I can appreciate how utterly impossible a task it would be to continue the custom, since year by year our ranks grow in numbers; yet, although I shall have to forego this pleasure in the future, I shall deem it a privilege, as you suggest, to write to *you*, confident that my woes or joys, failures or success, shall be heard by a sympathetic ear and receive such praise or counsel as they merit."

"You seem to be in quite a predicament, but I hope you will not find it necessary to treat your children as that same 'old woman' did. . . ."

"I am sure that I owe a great deal to '85 and love it more each year as I get older and realize a little more of what it did for me. I hope always to do nothing of which it might be ashamed. . . ."

"The twentieth anniversary of my birthday is before me and it is a pleasure for me to write this annual letter to you."

PROBLEMS OF THE ELEMENTARY SCHOOL

"Pursuant to your request of last year, that when my birthday rolls around I should write you, I take great pleasure in doing so.

"I missed your letter this year very much; but I must also say that it surprised me that you could keep up your custom for as long a time as you did. . . ."

I usually find time to send a brief acknowledgment on a postal card of all letters received after I have ceased to take the initiative.

The mechanics through which I carry out this plan is as follows. I use an ordinary report book well bound and containing some three hundred pages, in which I make three records. The first fifty pages are devoted to a list of the graduates by classes, a page or two to each class. Next follows a chronological record, one page to each two days of the year, thus:

APRIL

	(05,√06, 07, 08,√)	
27 89	John Peterson	Jan. '04 80 Cooper
	(07,√08,√)	
91	Fannie Hempstead	June '05 122 Covert
	(03,√04,√05,√06,√)	527 Hancock
28 87	Paul Hester	Feb. '02 654 Bushwick
	(03,√04,√05 06ret)	
88	Richard Smith	June '04 1680 Evergreen
	B. Geo. (08	
91	Harriet Wilmer	Jan. '07 87 Central

THE ALUMNI

The explanation of these entries is: John Peterson was born April 27, 1889, was graduated January, 1904, and lives at 80 Cooper Street. I wrote him on April 27, in 1905, 1906, 1907, and 1908, and received replies from him in 1905 and 1908. Similarly for the other names. In the case of Paul Hester, in one of his replies he has informed me of his change of residence to 527 Hancock Street. Richard Smith replied in 1903 and 1904, but not in 1905, and my 1906 letter was returned to me by the post-office authorities as "Not Found." Harriet Wilmer has a brother George, who was graduated before she was, which I must remember when I write her in order that my letter will vary from that which I sent her brother. I also note cases of death and marriage, with dates.

The last fifty pages are given to an alphabetical list, thus:

A					
Aa-Ag			Ah-An		
Ackerman	Peter	Aug. 17	Anderson	Henry	Feb. 8
Abbey	George	Sep. 26	Andrews	Laura	Jan. 26
Abbott	Stone	Mar. 18			

The dates given are the birthdays, and so give a reference directly to the previous record. Susan Abbott married, and her married name is Stone; she will also appear in this record under that name.

It may be that a card-catalogue record would be

PROBLEMS OF THE ELEMENTARY SCHOOL

even more convenient, though the book scheme in use seems to meet the requirements quite satisfactorily.

I keep letters written up sufficiently in advance so that I am free to neglect this particular business on any day when other matters would crowd it out. On my desk memorandum are noted the names of those to whom letters are to be sent each day, so that the only attention required is to see that the letters are mailed on the proper day.

Replies received are indorsed at the top with sender's name and birthday and year, and filed according to date. They are thus available, chronologically, as to any particular pupil, by means of reference to the second record.

Perhaps the thought that is most likely to occur regarding the scheme I have here described is that it must take too large an expenditure of time. I am safe in saying, however, that an average of ten minutes a day more than covers the attention which it demands, and I am convinced that there are few more profitable ten-minute periods in my school day.

X

THE CARE OF ADOLESCENT GIRLS

THERE are several reasons why special consideration of adolescent girls at their critical periods is commonly neglected in the elementary schools. Chief among them are: ¹

1. It is generally regarded as a high-school problem only.

2. Teachers are carelessly or ignorantly indifferent to their duty in this regard.

3. The attendance record is overemphasized in many schools and school systems.

4. Overconscientiousness and fidelity to school requirements, one of the mental characteristics of adolescence, leads many girls to neglect their physical well-being.

5. There is a widespread conviction that the subject is a delicate one to discuss, and that consideration of it would be resented by the public concerned.

¹ In part restated from "The Management of a City School," pp. 164, 165.

PROBLEMS OF THE ELEMENTARY SCHOOL

6. There is uncertainty as to how far the school should go in recognition and solution of the problem.

As to each of these considerations in turn, I answer as follows:

1. Any investigation of the facts shows that it is not a high-school problem alone, but, to a very important extent, one seriously demanding the attention of the elementary school.

2. The indifference of teachers is not willful and exists in consequence of ignorance and of loyalty to conventional school traditions.

3. The attendance record is one of the conventional school traditions, blindly worshiped as a special feature of the "system."

4. Girls may be brought to see that there is a truer definition of Duty than the nearsighted one of always doing the present work at whatever future expense.

5. The delicacy referred to is essentially a false one, and the public will not resent a sane recognition of the problem by the school.

6. A few definite propositions as to the limitations of the school may be established, and within these limitations much positive good may be done.

These statements result from conservative generalization based upon a review of five years' experience in endeavoring to solve the general problem. I shall

THE CARE OF ADOLESCENT GIRLS

first briefly recount that experience and then return to these six statements to give them more detailed and convincing support.

For a number of years my conviction had been growing that the school shirks its plain duty when it deliberately refuses to consider the patent fact that hundreds of adolescent girls are forced through the curriculum, in competition with boys, with utter disregard of the consequences as related to their physical well-being. Whatever may be said in favor of a curriculum providing identical subject matter for both boys and girls, no argument is needed to prove that maturing girls should not be put through the work at the same pace with the boys. It is probably true that the preadolescent girl can pursue her school work side by side with the boy without the slightest danger, subject only to the ordinary variations in individuals, which are unrelated to difference of sex.

But to the older girl is due special consideration; first at the time when her maturity is establishing itself, and then at her regular periods as they recur. If this consideration is extended her and she is permitted at these times to slacken her speed and intensity as applied to the school work, under ordinary circumstances she will more than make up the resultant loss by the renewed vigor of her normal attention to the work. If this consideration is withheld,

PROBLEMS OF THE ELEMENTARY SCHOOL

serious impairment of her physical self may follow, and in a certain proportion of cases is sure to follow. One may read Dr. Clarke's "Sex in Education" with profit, without taking sides in the discussion of co-education, which was so violently precipitated by the publication of the book. Dr. Clarke's arraignment of the school for its neglect of its girls may or may not have been too strongly put, but that there is neglect is not open to serious question.

But to determine that the school has a duty in this respect is far from settling the question of what this duty consists and how in actual practice it may be performed. It is clear that each teacher of girls ought to have an intelligent appreciation of the importance of modifying the effort required of a girl as her physical condition may demand. We may, without discussing the reasons therefor, confess that very few teachers have such an appreciation. The first duty then is to inform teachers on the subject. Of course, if a girl's mother, on her part, is intelligent and determined she will, if necessary, take the law into her own hands and conserve her daughter's health whatever the consequences to her school record. But few mothers do this, which is due to a lack of understanding, or of determination, or of both.

Some mothers have a sympathetic and frank rela-

THE CARE OF ADOLESCENT GIRLS

tionship with their daughters which is based on intelligence and in turn leads to further effective understanding. As to these, the school has merely the duty of meeting them in a spirit of comprehension and co-operation. But many mothers—it is to be feared a great majority of them—are either diffident about thus intruding into the daughter's personal life or are ignorant of the seriousness of the matter. As to these, the school has the further duty of informing them and of awakening them to a sense of their own obligations. There is a work then to be done which shall bring the mother and the teacher, who are both concerned with the welfare of the same girl, into a position of mutual understanding and intelligent and effective coöperation.

To do this was the aim which I set for myself as principal of a mixed school in which are enrolled over one thousand girls. In furthering that aim I have been fortunate in having women assistant principals of exceptional ability and devotion to the needs of the school. Without such assistance, of course, a man principal would be estopped from carrying out any systematic plan of campaign along this line, but with women of mature poise and tactful judgment, into whose hands the details of such a plan can be placed for execution, much good may be accomplished. In five years three different assistants successively have

PROBLEMS OF THE ELEMENTARY SCHOOL

carried out my plan, with uniform tactfulness and with continued success.

The first move was a campaign of education among the teachers; every girls' teacher was invited to read Dr. Clarke's book—some other might have served just as well, but that was at hand and seemed at the time most valuable. The assistant next conferred with the teachers, explaining our plan of action and particularly impressing upon them the thought that the school would hold them more responsible for considerate treatment of their girls than for a perfect attendance record. They were assured that a roll book which showed periodic absence for some of the girls would be given appreciative recognition and that no criticism would be made of such record. They were further assured that they were not expected by reason of this new attitude toward legitimate absence, to overlook or condone inexcusable neglect of school work. In other words, "discipline" in its best sense, was not to be impaired—to the contrary, it would be strengthened, for it would be put upon an intelligent footing.

In order to reach the mothers, the assistant planned a schedule of all but the youngest girls in the higher grades and began to request the mothers of these girls, a few each day to call at the school. These individual conferences have continued ever since, with practi-

THE CARE OF ADOLESCENT GIRLS

cally no modification of method, which consists in making clear the following points:

(1) The mother is assured that the school wishes to consider her daughter's health and coöperate with the home in intelligently conserving it. By most parents, as indeed by many school authorities, the school is regarded as an institution concerned exclusively with the training of the intellect, and it is assumed that consideration of physical and moral welfare must be subverted to intellectual progress. It is therefore necessary in most cases to make very explicit the assurance that the school regards both the "marks" which the girl gets in her studies and her record of attendance of less consequence than the fulfillment of her future happiness as a woman. There must be no misunderstanding on this point. It is not that the school wishes in any way to neglect the intellectual training of its pupils, but that, to put it quite concretely, it is more concerned with graduating a girl at the age of fifteen with a record of "satisfactory" in her lessons, knowing that her future physical and mental integrity are guaranteed, than with graduating her at the age of fourteen with a record of "superior," if this is at the expense of normal health and comfort in her adult life. If, as is quite possible in exceptional cases, she can graduate at the age of twelve with a striking record, without having augmented her

PROBLEMS OF THE ELEMENTARY SCHOOL

chance of physical derangement, she must not be hindered from doing so; but the fact that an occasional girl can do this, does not warrant us in citing her as a model for every other girl to emulate, regardless of circumstances and consequences.

(2) The mother is questioned as to her daughter's physical condition. This discovers the mother's own attitude toward the subject. She may never have given it a thought ¹ and frankly says so. If this is the case she is urged to consider its importance, to secure her daughter's confidence, and to direct her daughter wisely and sympathetically in all matters, physical and moral, growing out of her adolescence. If she has already established herself in this proper maternal relation, she is quite ready to give the school the necessary information which shall act as the guide to the school attitude toward her daughter. If there has been any functional disturbance which seems abnormal, for which medical advice has not been had, the mother is urged to consult the family physician without delay. In addition to the direct subject of the interview, it is possible in many cases to discuss other

¹ The following reply from one of the mothers to whom the usual request to call at the school had been sent, is an index to the attitude of some: "Please excuse me for troubling you with this writing. I received a card from school this morning for me to come to school. I hope — has not done anything wrong, if she has I will punish her. . . ."

THE CARE OF ADOLESCENT GIRLS

matters bearing upon the health of the girl, such as dress, late hours, dancing, etc.

(3) The mother is introduced to her daughter's teacher and if there is anything unusual in the girl's condition this is explained to her with instructions as to what special consideration is to be shown to the girl in the classroom.

(4) The mother is urged to give her daughter's health prior consideration to her studies; she is urged to keep the girl at home one or more days as necessary during her catamenia, or if she is sufficiently normal to send her to school, to direct her to inform her teacher of her condition or to write for her a private note to the teacher to that effect. The teacher is instructed that, upon receipt of this information, she is to modify the strict requirements of the class work in this case for the time being.

We have found the response to our efforts friendly and interested and in many cases intensely appreciative. In not more than one-third of the cases have the mothers failed to respond—employment during the day undoubtedly accounts for many of these. It may be noted that our register of pupils is made up racially¹ as follows: American, 52 per cent; German, 22

¹ Determined in accordance with the United States Immigration Commission standard, by race to which the father of the pupil belongs.

PROBLEMS OF THE ELEMENTARY SCHOOL

per cent; Hebrew, 6 per cent; English, 3.7 per cent; Irish, 3.2 per cent; balance, scattering. In general it may be said that we note practically no difference in attitude or degree of appreciation along racial lines.

In order to systematize the work a card-catalogue is kept in which is entered for each girl, her name, class, date of birth, date of interview with mother, date of physical maturity, remarks as to special features of the case. A study of these cards serves to indicate the importance of the work, and citations by a very random selection from these cards may throw such light upon the problem as general statements fail to do.

CASE 1. Age, fifteen years, nine months; matured at age of twelve; sometimes sick every three weeks.

CASE 2. Age, fourteen years, three months; matured at twelve; irregular; excessive, headaches, studies hard, worries over work, does not go out enough.

CASE 3. Age, fourteen years, eleven months; matured at twelve years, six months; delicate, weak spine, under doctor's care.

CASE 4. Age, fourteen years, no months; not matured; anæmic, studies too hard, until six months ago lived in country and rode mile to school on wheel; arrangements made for half-day school attendance for remainder of term.

CASE 5. Age, fourteen years, one month; not matured; perfectly well.

THE CARE OF ADOLESCENT GIRLS

CASE 6. Age, thirteen years, eleven months; not matured; mother's remark: "Oh, I wish every school would do this!"

CASE 7. Age, fifteen years, no months; matured at twelve years, six months; suffers a week.

CASE 8. Age, thirteen years, no months; not matured; no indications; school work not too hard.

CASE 9. Age, fifteen years, two months; matured at fifteen; miserable for two years.

CASE 10. Age, fourteen years, eleven months; not matured; perfectly well.

CASE 11. Age, thirteen years, eight months; matured at thirteen years, six months; complains of headache; too much home work; more outdoor exercise recommended.

CASE 12. Age, fifteen years, nine months; matured at fourteen; perfectly normal; does not complain of school work.

CASE 13. Age, thirteen years, no months; matured at twelve years, six months; perfectly normal.

CASE 14. Age, thirteen years, nine months; not matured; probably coming on; headaches; dizziness.

CASE 15. Age, thirteen years, eight months; matured at twelve; pain; irregular.

CASE 16. Age, thirteen years, eleven months; matured at thirteen; painful; reads too much; not strong; needs more exercise.

CASE 17. Age, twelve years, seven months; not matured; tired feeling; headaches; nosebleed.

PROBLEMS OF THE ELEMENTARY SCHOOL

CASE 18. Age, twelve years, ten months; matured at eleven years, six months; backache.

CASE 19. Age, fourteen years, four months; matured at twelve; drowsy; headaches; thinks teacher does not like her.

CASE 20. Age, fourteen years, ten months; matured at fourteen years, three months; painful; must remain home at least one day; crying spells; morbid; wants to leave school.

CASE 21. Age, twelve years, six months; matured at twelve; miserable for two years; special arrangement made regarding home study.

CASE 22. Age, fourteen years, two months; not matured; probably near; inherits nervousness and tendency to epilepsy.

CASE 23. Age, sixteen years, three months; matured at twelve years, four months; backward in school owing to moving from city to city; studies all the time; worries about work.

CASE 24. Age, fourteen years; not matured; studies until head aches; averse to exercise; wants to read all the time; sits up late; mother promises to see that she has more sleep and exercise.

These cases, selected from hundreds, are sufficient in number to indicate the serious responsibility which the school assumes when it undertakes to administer education in ignorance of the conditions disclosed by this record. To continue administering thus in ignorance would seem reprehensible in the extreme. Think

THE CARE OF ADOLESCENT GIRLS

of a class in which are included such extremes as CASE 2 and CASE 12, and consider both the great disadvantage under which the teacher labors who is utterly ignorant of the difference existing between normality and abnormality, and the great injustice which is done to CASE 2 when her effort and proficiency are relentlessly measured by the same standard which is applied to CASE 12. Consider the gain in efficiency of any class when these injustices are eliminated and the standard of management is shifted from the idea of "the girl for the class" to that of "the class for the girl." How much more intelligently can the teacher treat CASE 3, for instance, knowing that she is under the care of a physician for spinal trouble! How much wiser will be the attitude of the teacher toward CASE 11 and CASE 5, when she learns that the former although only thirteen years old, is already a woman, while the latter at fourteen is yet a girl! How much more effective will be the work of the teacher with CASE 19 when she realizes that the girl thinks her "teacher does not like her" and knows the physical basis for this notion!

I return now to restate my convictions in answer to the six excuses originally advanced for neglecting this problem.

1. When we consider that even in the twenty-four cases cited, the age of maturity varied from eleven

PROBLEMS OF THE ELEMENTARY SCHOOL

years, six months, to fifteen years, and that the average age of graduates is about fourteen years, six months, it is clear that the problem is one which essentially and primarily concerns the elementary school. Considerate recognition of the problem must, of course, extend into the secondary schools and the colleges, but with that we are not here concerned. The responsibility of the elementary school is especially acute because it is while in attendance thereupon that the great majority of girls establish their maturity—establish it either normally to their future safety and happiness or abnormally to their future misfortune and irremediable suffering.

2. Every teacher worthy of a place in the school, will respond sympathetically and intelligently, once the importance of this problem is presented to her, and will certainly take her part in the campaign of reform. Her enlistment cannot help but give to her teaching a pedagogic value and an intelligent direction which has previously been lacking.

3. A proper view of the attendance record is to be obtained by thinking of school problems from the child out and not from the system down. It is clearly our business to consider the child first, last, and all the time; when we have done that we may well show an utter disregard of the statistical results. To promote a certain orthodox per cent of pupils, to secure a cer-

THE CARE OF ADOLESCENT GIRLS

tain perfection-approaching per cent of attendance, to make the ratio of something to something else approach a shibbolethic norm—all these ambitions are the ambitions of the pedantic pedagogue, of the self-seeking slave of the system, and must be eschewed by the professional student of educational problems. Let the roll book suffer and not the girl.

4. If the girl herself cannot comprehend that true devotion to duty sometimes requires her apparent neglect of the school tasks, then the school and the home must restrain her against herself. The sex inheritance of the girl is such as to make her more prone to err in this way than does the boy. If a teacher of a mixed class overestimates the ability of her pupils and assigns, for instance, twice as much home study as any of them can reasonably do, it is the girls who are the most likely to suffer. The inheritance of the boy is a craving for the open, for activity, for conflict. If the teacher gives him such an amount of work as would interfere with the business of his life, which he instinctively and correctly infers is not grammar and algebra but growth and action, he overrules the teacher and her error without compunction, and follows the call of his instinct. The adolescent girl overlays her impulse with devotion, her whisper of rebellion with obedience to law and custom, and blindly follows the teacher who personifies Duty. Needless to say that this summary is

PROBLEMS OF THE ELEMENTARY SCHOOL

stated in general terms, but the few exceptions either way but serve to emphasize the rule.

5. The fear of public resentment is probably the most potent factor in preventing teachers and principals from undertaking the serious duty which we have been considering. Broach the subject in any quarter and, even where recognition of the problem is unquestioned, the invariable reply is: We do not dare. I feel that the statement which I am about to make is the most important contribution to the subject which I have to offer. When starting the work I shared the general feeling that we should have to face resentment on the part of perhaps a large number of parents, and I forewarned my assistant that, if she undertook the work, she would have to be prepared to meet this resentment with patience and resignation, pursuing her way with the martyr's spirit and suffering rebuke for the sake of the ultimate good which must surely come of the work. My warning was absolutely unwarranted by the subsequent events. Three women successively have managed the work; naturally, though uniformly devoted to the spirit of the undertaking the three differ in personality, so that if resentment were the sentiment among the mothers of the district, it surely would have evinced itself with one or the other of these interviewers. They have met some mothers who were ignorant and a few who were indifferent, but

THE CARE OF ADOLESCENT GIRLS

in five years' time and in hundreds of cases, they have had no single case of resentment shown by a mother. In my judgment, this absolutely dismisses the question of delicacy, and makes it inexcusable for us to neglect our plain duty.

From time to time, feeling the public pulse, we have written to some of the mothers in the following strain:

You will doubtless recall coming to the school on _____, 190____, upon our request, for a conference regarding your daughter _____

We are giving a considerable amount of time and thought to this subject, and it would be of assistance to us in formulating our plans for the future, if we might have some expression of opinion from the mothers who have coöperated with us.

May we trouble you to advise us as to your opinion of the value of this work, as seen in the case of your own daughter, or of others whom you may know.

To this request we have received many encouraging replies, among them the following:

(1) Received your letter and in reply would say in regard to the conference concerning my daughter, that it is very valuable work and should be continued.

(2) I think the interest and time you have taken in the health of maturing girls should be continued as I do not think it is a loss of time. With my daughter

PROBLEMS OF THE ELEMENTARY SCHOOL

your plans have worked out with great success as her health has improved greatly.

(3) In answer to yours of the sixteenth, asking for an expression of my opinion concerning the course you have taken in regard to the subject in question, I would say that it meets with my heartiest approval, and I think it both a necessary and praiseworthy cause. I think every girl will be benefited by your thoughtfulness.

(4) Your note of the sixth inst. was duly received and I thank you for giving me the opportunity to express my opinion concerning your thoughtful interest in connection with the health of maturing girls.

As a mother who has had three girls attend your school from the beginning of their school career to graduation to the high school, I can heartily indorse your system which certainly should be continued.

(5) In reply to your letter I would state that the stand you are taking in regard to the girls between the ages of thirteen and sixteen is a very good one. I found it so with my daughter. She was a very nervous and excitable child and I found as each month came around she was more so. I kept her at home and forbade all books and lessons and I think she was much better for it.

(6) In reply to your letter of _____, I wish to say that I think it a very wise plan.

THE CARE OF ADOLESCENT GIRLS

As to my daughter, I am very sure that if her health had not been considered, she would have been compelled to give up her studies entirely and of course lose her diploma which she now possesses and prizes very highly.

Therefore I say again the good work should be kept up if possible. Ever gratefully yours,

(7) I have so much gratitude in my heart to you who have been so kind and thoughtful for my daughter's welfare, that I cannot let this time pass without expressing my sincere thanks to you. —— is strong and well, better than she has ever been, and it is owing to your loving consideration for her health. It is with regret that she leaves her teachers and I can only hope that she will be as well cared for in the four years to come in high school.

(8) I assure you we appreciate most thoroughly your interest in the health and welfare of the growing girls under your charge. Health is very important. Your words aroused me to see the injury that might be done by sending immature girls to school to drag through weary hours.

(9) I received your letter of the —— and wish to let you know that I think the coöperation of the parents and the teachers is a very fine plan, as the best results in work are thus obtained by a perfect understanding of the parents and teachers. The value of this work is very great and be assured it has done much for mine and many others.

PROBLEMS OF THE ELEMENTARY SCHOOL

(10) Answering your letter of —, I am only too pleased to give you my opinion on the subject of which you write.

It is certainly a blessing to many girls who are attending school that the teachers are giving so much time and thought to the subject, as many mothers who keep their daughters home unnecessarily at times, do not think of letting them stay at home in such a case where it is really for the girl's own future benefit.

This little conference with mothers I believe will in the cases as above mentioned, remind them of their duty, and in time we will have healthier girls than at the present day. I do not think that it is because mothers are neglectful in any way toward their daughters, but because they do not realize that rest at such a time means so much in after life.

Extending my best thanks to all the teachers engaged in this work for their thoughtfulness, . . .

(11) I wish to say that in my opinion the method you are pursuing in this relation deserves approval.

It gives to the teacher an acquaintance with the particular physical condition of each girl and also brings to the attention of the parent the importance of studying her daughter's bodily and mental welfare.

To my mind no general rule can be of value in a matter like this, but each girl must be dealt with according to the necessities of her own case and what these may be can best be learned by a meeting of mother and teacher.

THE CARE OF ADOLESCENT GIRLS

(12) I recall my visit to the school on —— of last year. Too much time and thought I am sure cannot be given to the subject you have under consideration. Mothers are too prone to let the future take care of itself, with the result we know only too well, trusting to Providence what they should do themselves. Several cases have come under my personal observation which strengthen my conclusion in this regard and in one case the ending was sad indeed.

I am heartily in sympathy with your work. If the mothers will not take it up at home, it is the province of the state, through the schools, which have the care of the girls for such a great part of their school life, to do it.

6. A word or two as to the limitations of the work. I understand that we have come far short of solving the great problem of adolescence in the large. I realize that there is an important problem presented by adolescence of boys, but I share the sense of bafflement under which educators all over the country are laboring. I have nothing to offer toward the solution of this phase of the problem. But what we have done has been done through conscientious work by devoted assistants and teachers, and done to some purpose and with definite result. I believe that in this as in all school difficulties, we should aim to solve completely a limited phase of a problem rather than lightly to touch upon the solution of the whole problem. Not

PROBLEMS OF THE ELEMENTARY SCHOOL

too much has been nor should be attempted. Above all, the school must at no point assume to replace the physician, but it should coöperate with him and supplement his work, and where necessary, lead to the calling of his attention to cases requiring it. There must be nothing melodramatic in our attitude; we must not see difficulties where none exist, nor borrow trouble; we must work quietly, tactfully, and diligently and do thoroughly the work within the limits set forth above.

A woman principal should have no difficulty in carrying forward such systematic supervision as I have indicated. A man principal should be so established in a school that, working through competent women assistants, he, too, may give the impetus to such supervision. If he hesitates to discuss the subject, I here respectfully offer the suggestion that he place this chapter in the hands of his woman representative with the simple statement that he wishes her to undertake the work outlined and that he will support her in her efforts.

INDEX

(Authorities cited are printed in SMALL CAPITALS)

- Absence-record of girls, 204
- Acquisition in composition, 83
- Adolescent girls, care of, 199
- Algebra applied to arithmetic problems, 146
- ALLYN AND BACON, 85
- Altruism in society, 4
- Alumni, the, 185
- Analysis in grammar, 111
- Arithmetic devices, 132
 - problems, use of color in, 172
- ARNOLD, SARAH L., 93
- Astronomy in the curriculum, 41

- BAGLEY, WILLIAM C., 49, 133
- Blackboard, use of the, 161
- Boston, curriculum in, 37
- BUTLER, NICHOLAS M., 33

- California prize essays, 57
- Capitalization rules, 105
- Carelessness immoral, 67
- CARPENTER, BAKER AND SCOTT, 87
- CARPENTER, G. R., 89
- Caste, natural, 11
- Catalogue, museum, 178
- Chalk, use of, 163
- CHANCELLOR, WILLIAM E., 54
- Chart, multiplication drill, 150
- Chicago, curriculum in, 37
- CHUBB, PERCIVAL, 81, 85
- CLARKE, DR., 202
- College influence on elementary schools, 10
- Colored chalk, use of, 170
- Commercial schools, 24
- Composition in upper grades, 81
- Compulsory education, 6
- Conduct, threefold basis of, 58
- Content and form studies, 38
- Culture and utility subjects, 48
- Curriculum, the, 36
 - and moral training, 65
 - the same for boys and girls, 201

- Democracy in our high school, 17
 - our peculiar concept of, 11, 15
- DEXTER, EDWIN GRANT, 7, 36
- DICKENS, CHARLES, 49
- Discipline cases and alumni interest, 187
 - the pedagogue's term, 34
- DRAPER, ANDREW S., 12
- Drill and moral virtue, 70
 - cards in arithmetic, 133

INDEX

- Drill, insufficient, 50
- Duty, education as a, 4
 - the girl's devotion to, 213
- Education as duty and privilege, 4
 - compulsory, 5
 - for leadership, 5
 - state control of, 3
- Educational ladder, 21
- Egoism in society, 4
- Einheitsschule, the, 9
- Elementary organization in
 - America, 7
 - France, 8
 - Germany, 8
- ELIOT, DR., 7
- EMERSON, ALBERT W., 88
- EMERSON-BENDER, 85
- English history facts, 127
 - in upper grades, 81
- Enriched curriculum, 40
- Equal educational opportunities, 27
- ESPENSHADE, A. HOWRY, 88
- Essentials, the, 38, 46
- Experiment station, the school
 - an, 78
- Expression in composition, 88
- Fads, 43
- Fagin, the pedagogue, 49
- FARRINGTON, FREDERIC ERNEST, 9, 177
- Fee, tuition, 17
- Financial basis of curriculum, 44
- Form and content studies, 38
- Formal compositions, 91
- FOSTER, WILLIAM TRUFANT, 85
- France, compulsory education
 - in, 6
 - school organization in, 8
- Fundamental operations in arithmetic, 132, 145
- GARDINER, J. H., 84, 85
- Germany, compulsory education
 - in, 6
 - gymnasial practice in, 29
 - pupils in the Volksschule, 16
 - school organization in, 8
- GILBERT-HARRIS, 88
- Girls, care of adolescent, 199
- Grammar, analysis in, 111
 - use of color in teaching, 175
- Habit building, 49, 133
- HANUS, PAUL H., 56
- High school, democracy in our, 17
- Higher schools in Germany, 8
- HILL, ADAMS SHERMAN, 86, 89
- HINSDALE, B. A., 92
- History facts, 118
- HUGHES AND KLEMM, 33
- HUGHES, R. E., 9
- Huxley's educational ladder, 21
- Hygiene Association, American
 - School, 32
- Ideal must have value, 70
- Idealist, the principal a practical, 78
- Ideals and interest, 68
- Impoverishment, danger of, 43

INDEX

- Informal compositions, 89
- Interest and moral training, 68
- Jack of all subjects, 43
- JOHNSON, CHARLES F., 85, 87
- JOHNSON, ROSSITER, 89
- Judgment and memory, 118, 132
- Kansas City, curriculum in, 37
- KELLOGG, BRAINERD, 88
- Kindergarten and moral training, 71
- KLEMM, DR., 177
- Ladder, Huxley's educational, 21
- Leadership, education for, 5
- Leisure, the school as, 53
- Lettering on blackboard, 168
- Longitude and time, 156
- Machine, defective school, 63
- Management, problems in, 177
- "Marks" and health of girls, 205
- Maturity, age of, 211
- Memory and judgment, 118, 132
- Mensuration of the trapezoid, 154
- Method, problems in, 81
- Model composition, 86
- Moral perfection expected, 59
 - training, 57
 - and drill, 70
 - interest, 68
 - the curriculum, 65
 - kindergarten, 71
 - time schedule, 67
- Multiplication drill chart, 150
- Museum, school, 177
- National Educational Association, 27
- New York curriculum, 37, 39
- Opportunities, equal educational, 27
- Organic structure, the, 3
- Organization in composition, 85
- Paragraphs, 87
- Parsing, 112
- PAYNE, BRUCE RYBURN, 32, 36, 38, 39, 40
- Perfection, moral, in children, 59
- PERRY, FRANCES M., 85
- Physical education, 31
- Principal a practical idealist, 78
- Privilege, education as a, 4
- Promotion of the unprepared pupils, 50
- Punctuation rules, 101
- Reading and thinking, 82
- Reorganization of American schools, 18
- Retardation, 63
- Rhetorical unity, rules for, 86
- ROBBINS-ROWE, 86
- Routes and speeds on educational rails, 29
- RUGH, C. E., 57
- St. Louis, curriculum in, 37
- San Francisco, curriculum in, 37
- SANTAYANA, PROFESSOR, 53
- Scheduled, the American child, 19
- School museum, 177

INDEX

- | | |
|--------------------------------------|------------------------------------|
| SCOTT-DENNEY, 85 | Trapezoid, mensuration of the, 154 |
| SCOTT-SOUTHWORTH, 85 | Tuition fee, 17 |
| Self-preservation, 3 | |
| Sex inheritance, 213 | |
| SHORTER, EDWIN DuBois, 91 | United States history facts, 121 |
| State support of education, 3 | Utilitarian aim in education, 38 |
| Structure, the organic, 3 | Utility and culture subjects, 48 |
| Sweden, compulsory education in, 6 | |
| | Voice, use of the, 162 |
| TAYLOR, JOSEPH S., 81 | Volksschule, the, 8 |
| Thinking and reading, 82 | |
| Time schedule and moral training, 67 | Wage-earner, the moderate, 20 |
| | WENDELL, BARRETT, 72, 87, 89 |
| | WINTERBURN, ROSA V., 88 |

